

# THE MILLING WORLD

AND

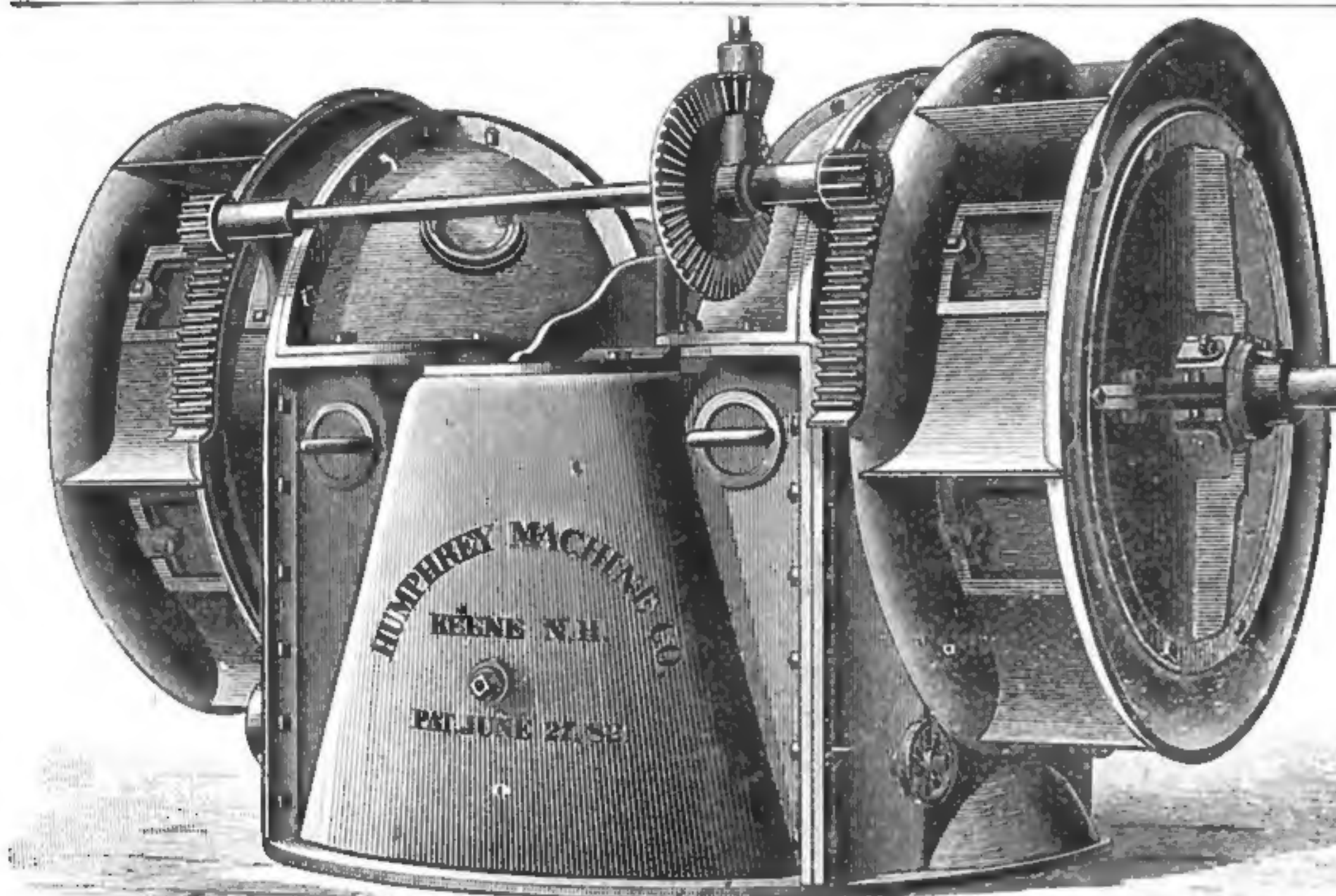
CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY MORNING.

VOL. XXIII. No. 16.

BUFFALO, N. Y., DECEMBER 15, 1890

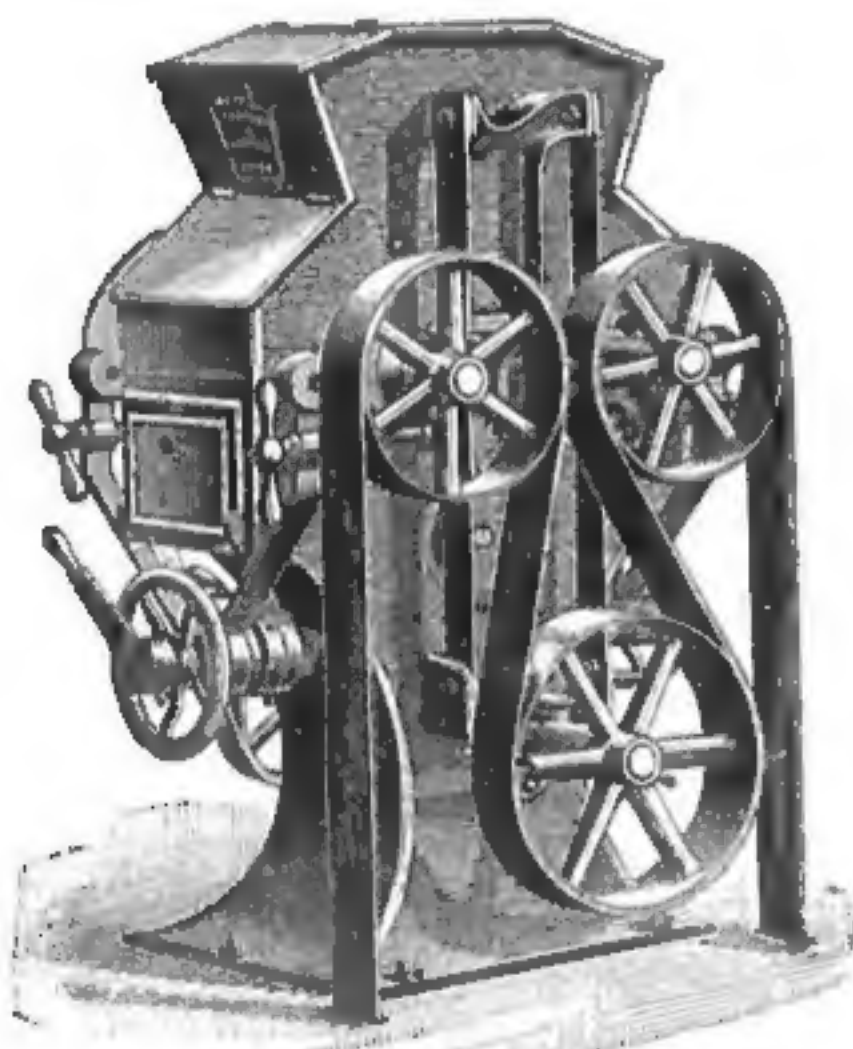
\$1.50 PER YEAR.



## THE X-L-G-R OR IMPROVED CIRCUMSHOT Water Wheel

On Horizontal Shaft. Saves cost, annoyance and loss of power incident to use of gears. Affords more available power from water applied at full or part gate than any other. The cheapest, best and most desirable Water Wheel yet produced.

EFFICIENCY, ECONOMY and EXCELLENCE FULLY GUARANTEED.  
Humphrey Machine Co  
KEENE, - - N. H.



'Keystone' 4-Roller Wheat Mill.

### FLOUR MILLS. CORN MILLS. HOMINY MILLS.

THE BEST MILL THAT HAS EVER BEEN BUILT IN GREENE COUNTY, PA.

THE J. B. ALLFREE CO.

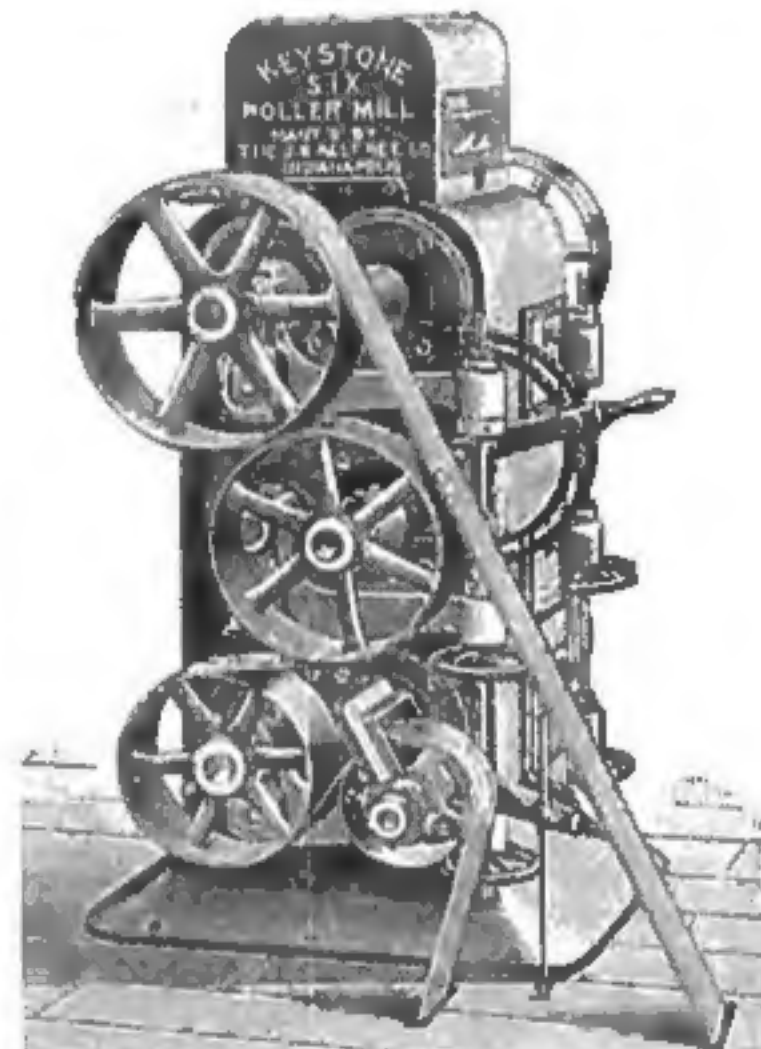
GENTLEMEN: After running my 25-bbl. mill over one month I feel it my duty, and in justice to you, to state that I am more than pleased with the mill you built for me; it started like a clock from the word "go." Before making my contract I made careful inspection of the different systems and machinery in the best mills, and now feel that I have made no mistake in awarding you the contract. I am well satisfied that your guarantees have been more than fulfilled as regards percentages, yield and capacity. I undoubtedly have the best mill that has ever been built in Greene County, Pa., which, together with the superior quality of wheat, enables us to turn out grades of flour that are unequalled, and reports which I have received from expert bakers fully substantiate this statement. My clean-up is equal to any 25-bbl. mill in the State. I will say that "The J. B. Allfree Rolls and Flour Dressers" can not be beaten in the world for light running and ease of access to all their parts. I would advise any miller building a new mill, or remodeling an old one, to place their contract with The J. B. Allfree Co. Thanking you for the prompt and efficient manner in which you built my mill, and wishing you continued success, I remain,

WHITELEY, PA., AUG. 27, 1890.

ANDREW LANTZ.

SEND FOR CIRCULAR OF OUR 6-ROLLER CORN AND FEED MILL.

THE BEST IN THE WORLD TO-DAY.



'Keystone' 6-Roller Corn & Feed Mill.

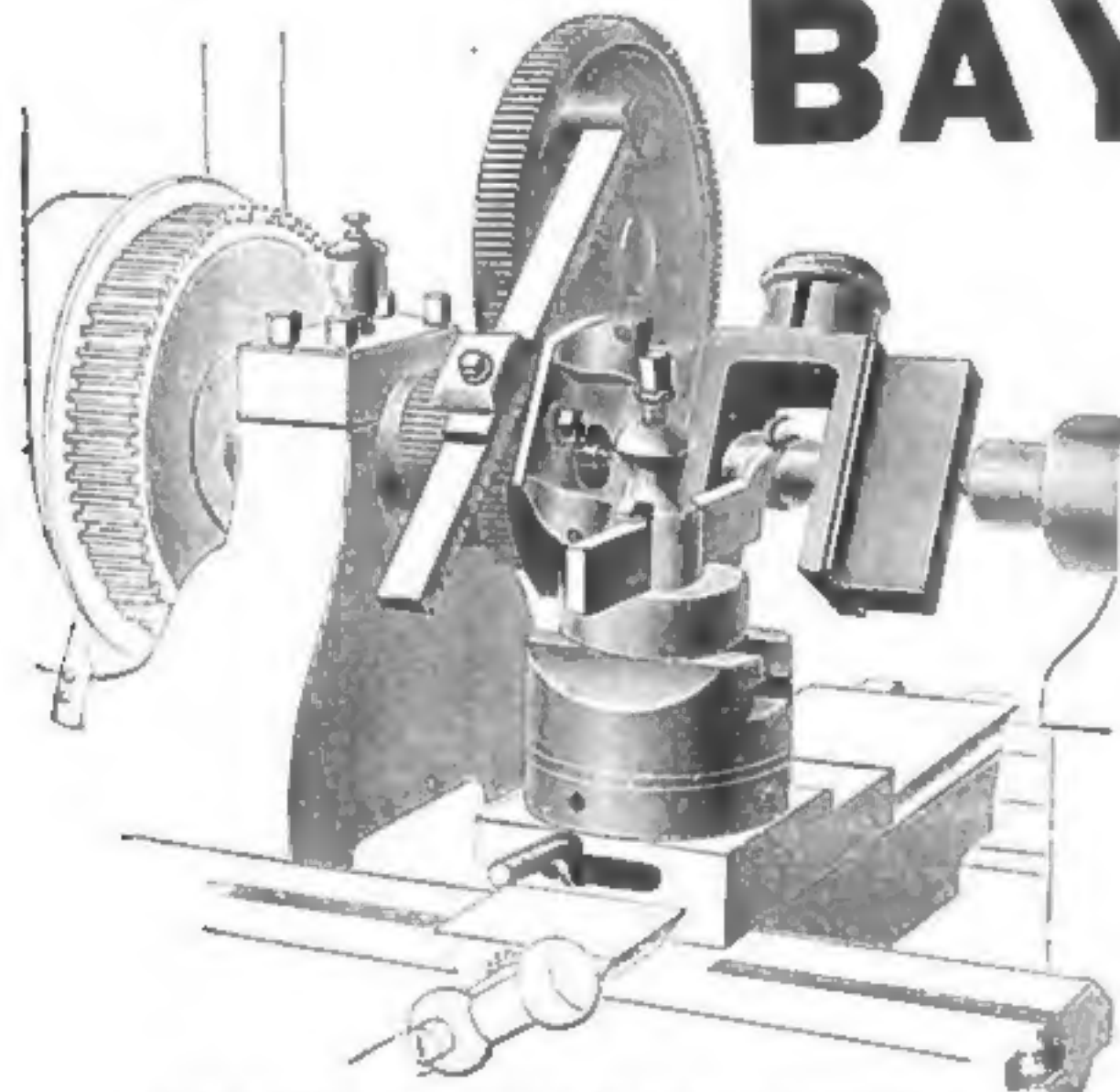
ADDRESS THE J. B. ALLFREE CO., 76 to 86 Shelby Street, INDIANAPOLIS, IND.

## BAY STATE IRON WORKS

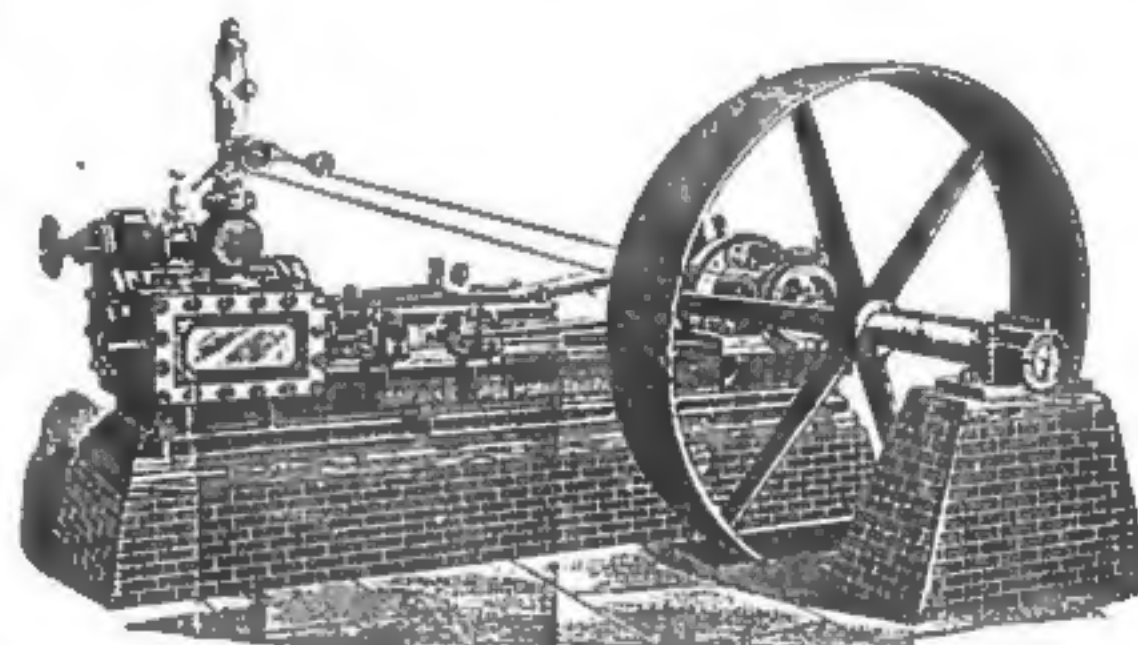
— MANUFACTURERS OF —

### Engines, Boilers & Hoisting Machines

Also the Patent Cross-Head Machine and Acme Cube Pipe Tongs. We make either Center or Side Crank Engines, on same bed. Make engines from 5 to 250 Horse-Power. Have over 3,500 Engines and Boilers and over 1,000 Hoisting Machines in use, and all giving good satisfaction. Send for Catalogue and Prices.



PATENT CROSS-HEAD MACHINE.



HORIZONTAL ENGINE.

Noble & Hall, Box 462, Erie, Pa.



# OFFICE OF CASE MANUFACTURING COMP'Y COLUMBUS, OHIO.

## The Case Roller Mills. Over 14,000 Pairs in Use.

PLEASE READ OUR DESCRIPTION OF THEM, EVERY STATEMENT OF WHICH IS ABSOLUTELY TRUE.

PLEASE READ WHAT MILL OWNERS SAY ABOUT THEM.



The accompanying cut is a correct illustration of our latest improved Four Roller Mill. For fine work, great durability, simplicity, and general excellence, they stand "head and shoulders" above all others.

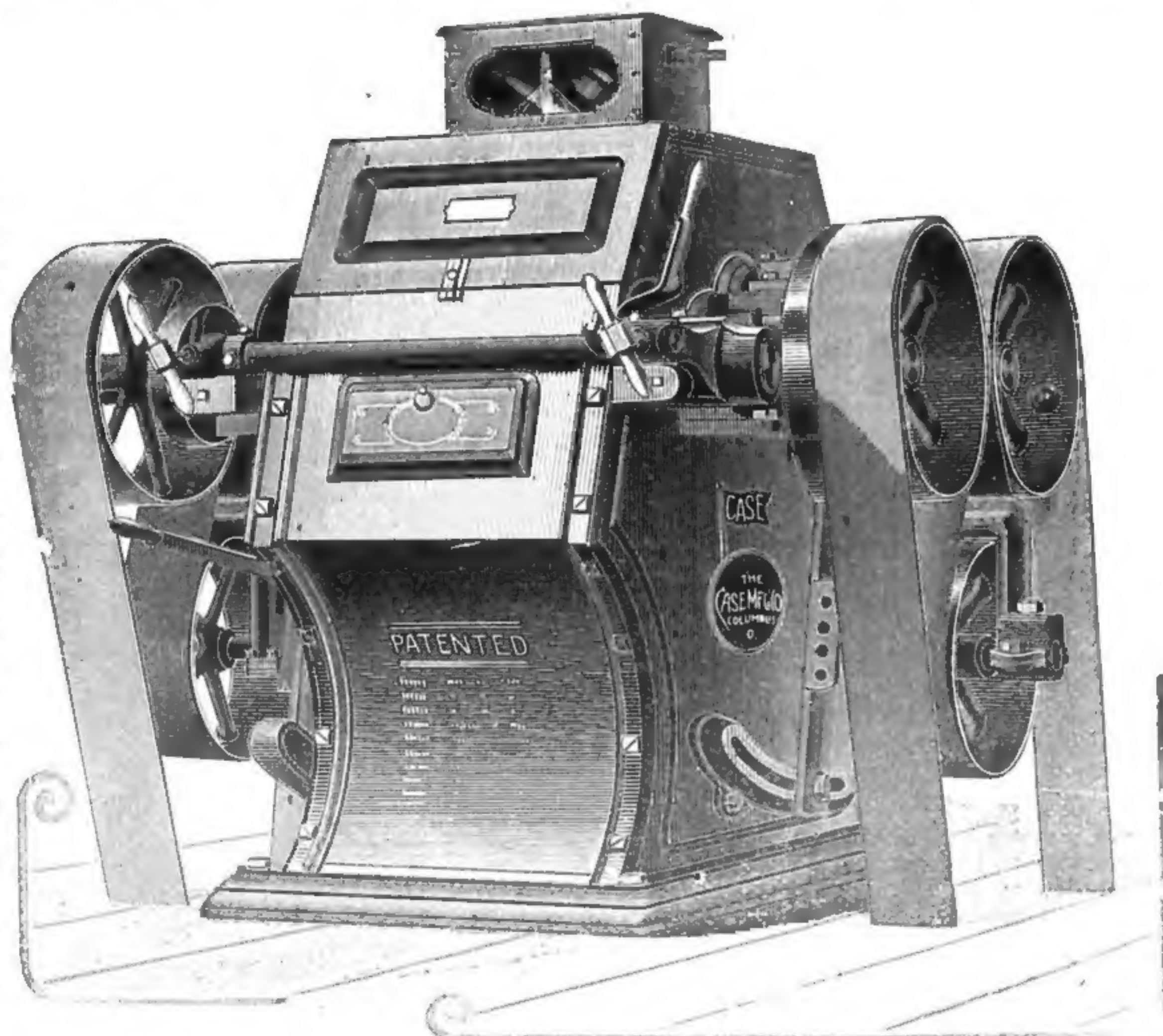
The frame is of iron with a heavy iron base.

The wood-work in top is of select cherry and black walnut, carefully shellacked and varnished.

The handles of adjusting screws and levers are finely nickel plated.

The joints are tight and dustless.

The adjustments easy, simple and perfect.



## LISTEN! MICHIGAN MILLERS TALKING NOW.

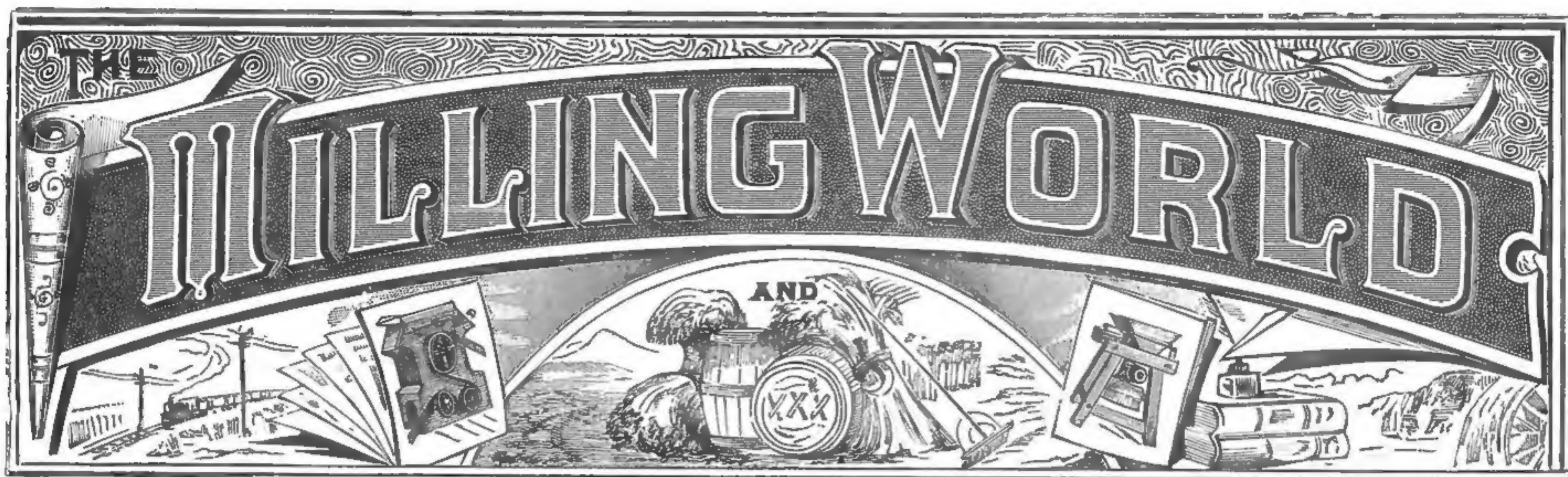
CHARLOTTE, MICH., AUG. 5, 1890.

MESSRS. CASE MFG. CO., COLUMBUS, O.

Gentlemen: The mill is running fine. We are enjoying quite a fine little trade. Already have put over twenty tons of flour on the market here since we started the 7th of July, and it is giving elegant satisfaction. Every one who has seen our outfit pronounces it A 1, and the Case Automatic Feed can't be beat. In fact the Rolls are models of perfection. We are making a close finish and placing our goods alongside of the long system mills, carrying off the cake. We are highly pleased with the millwright work, and find your Messrs. McKenie and Shough congenial gentlemen to do business with.

Very truly yours, PERKINS & MOON.





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THE fire-losses in the United States and Canada during November footed \$8,351,000, against \$20,081,600 in 1889 and \$16,003,975 in 1888. The milling and allied industries contributed \$781,000 to the November total. The total for the first 11 months of 1890 is \$94,118, 345, against \$124,644,450 in 1889 and \$118,957,300 in 1888.

WINNIPEG received and inspected 2,500,000 bushels of Manitoba wheat up to December 5th. Of that total, only 20 carloads graded No. 1 hard. Over 1,000 carloads graded No. 2. This is even worse than the poor showing in some portions of North Dakota and South Dakota. Wheat-growing up towards the frost-line is precarious business, generally.

IRRIGATION of arid lands-in the West is a subject that is much discussed nowadays. It would seem best to allow the question to settle itself in all sections as it has already practically settled itself in some parts of California, New Mexico and other States and Territories. That is to say, when increasing population makes land sufficiently valuable to encourage irrigation, let the settlers irrigate, as the Californians and others have done. It is not necessary to call upon the government to irrigate. Let it be done elsewhere as it has been done, and is now being done, in California, as a private enterprise.

THE legislative blow which Mr. McKinley aimed at the head of Canada, and which was designed to bring our people to their knees to supplicate from Uncle Sam the privilege of continuing in existence, has failed of its object. Canadians still maintain a perpendicular attitude and are developing a strength of back-bone which is daily lessening the possibility of coercing them into a line of action which their judgment refuses to sanction.—*Toronto, Ontario, Canada, "Electrical, Mechanical and Milling News."* Evidently typesetting, ink, paper and press-work are cheap, and maudlin palaver is plentiful, in the Dominion. Uncle Sam has aimed no blow at the head of Canada, does not care to see them on their knees, does not care whether they exist or not, does not want them in the Union, and does not pause even to think of their "judgment." Canadians at home can not get rid of the idea that the United States is pining to "annex," or "coerce," or do some other totally dreadful thing to Canada. One or two visits to this side of the border would convince the writer of the quoted flapdoodle above that the Yankees are too busy attending to big matters, at home, to care for small matters abroad. It is a noticeable fact that the only "annexationists" on the United States side of the border are Canadians living here, who desire to develop interests which they still hold in Canada. There are over 63,000,000 of us here, and the Wimans and Butterworths are as scarce among us as feathers on an alligator.

DURING the seven months since the first of last April, India has shipped to Europe 18,000,000 bushels of wheat grain, against 17,288,000 bushels in the corresponding months in 1889. Omitting the offensive admixtures of all sorts of horrible impurities, the amount seems ridiculously small when it is remembered that India was to eclipse all the rest of the world in wheat exports. The index was magnificent,

in British eyes, and the outcome is discouraging in the extreme. Of course the "magnificent development of India" has had some effect in Great Britain. It has practically ruined British wheat-growing by reducing the market price of wheat below the cost of production. As badly off as are the British farmers to-day in consequence of the Indian competition, it is a question whether they would be any better situated had the Indian enterprise failed totally instead of partially. Some other country's produce would have been imported to ruin their prices. The Briton is after "cheapness," and if he can not find it in India, he will seek it elsewhere. As for British millers, they may well thank their stars that the Indian enterprise has fizzled. Had the Indian supply risen from 45,000,000 to 100,000,000 bushels, instead of sinking to 18,000,000, the British millers would have found themselves swamped by the nasty Indian grain. The more Indian wheat they take, the more strong American or other wheat must they have to "carry" the poor, weak, thin Asiatic stuff into consumption. The collapse of the Indian enterprise is a stroke of good fortune for British millers, whether they see it in just that light at present, or not.

AND now it is suggested that the Millers' National Association take an excursion to Great Britain as a part of the programme for the next National Convention. That is not a bad plan, by any means, especially as a large number could arrange to go quite cheaply, and a good many would go, especially the younger scions of milling families. It will be remembered that ten years ago a very respectable delegation of British millers, both in quality and number, visited this country to attend the exposition of mill machinery held in Cincinnati. Their principal mission was to learn machinery and methods, while our millers would return the visit chiefly to learn of the markets and how best to handle the trade. Let us have the excursion.—*Chicago "American Miller."* Great heavings! What would the blawrsted Britishers think of a "convention" of the Yankee "National," supposing the convention to be conducted on the plan of 1888 in Buffalo, of 1889 in Milwaukee, or of 1890 in Minneapolis? Imagine British spectators treated to three or four days of round-and-round-and-never-get-there talk, ending with a "magnificent banquet"! Will not our esteemed Chicago cotemporary qualify its advocacy of the European jaunt by providing that the convention shall be modeled on new lines and carried out in a spirit different from that which now pervades the "National"? A convention similar to that of Buffalo, Milwaukee or Minneapolis would precipitate a general European war. Our own and only "National" should not be allowed to go to Europe unless our alleged navy accompanies it. We'll wager a barrel of Kalamazoo red-dog that not enough millers would go to Europe to hold even the shadow of a convention. With the last three or four home meetings inglorious fiascoes, a foreign meeting may well be considered an ornamental funeral too expensive for the corpse. If less than 100 millers could be attracted to Minneapolis, or less than 50 to Milwaukee, what probability can there be of attracting a half-dozen to London or Edinburgh?



# The DAWSON ROLL WORKS CO.

## FOUNDERS & MACHINISTS,

—MANUFACTURERS OF THE—

# Dawson Roller Mills

—AND FURNISHERS OF—

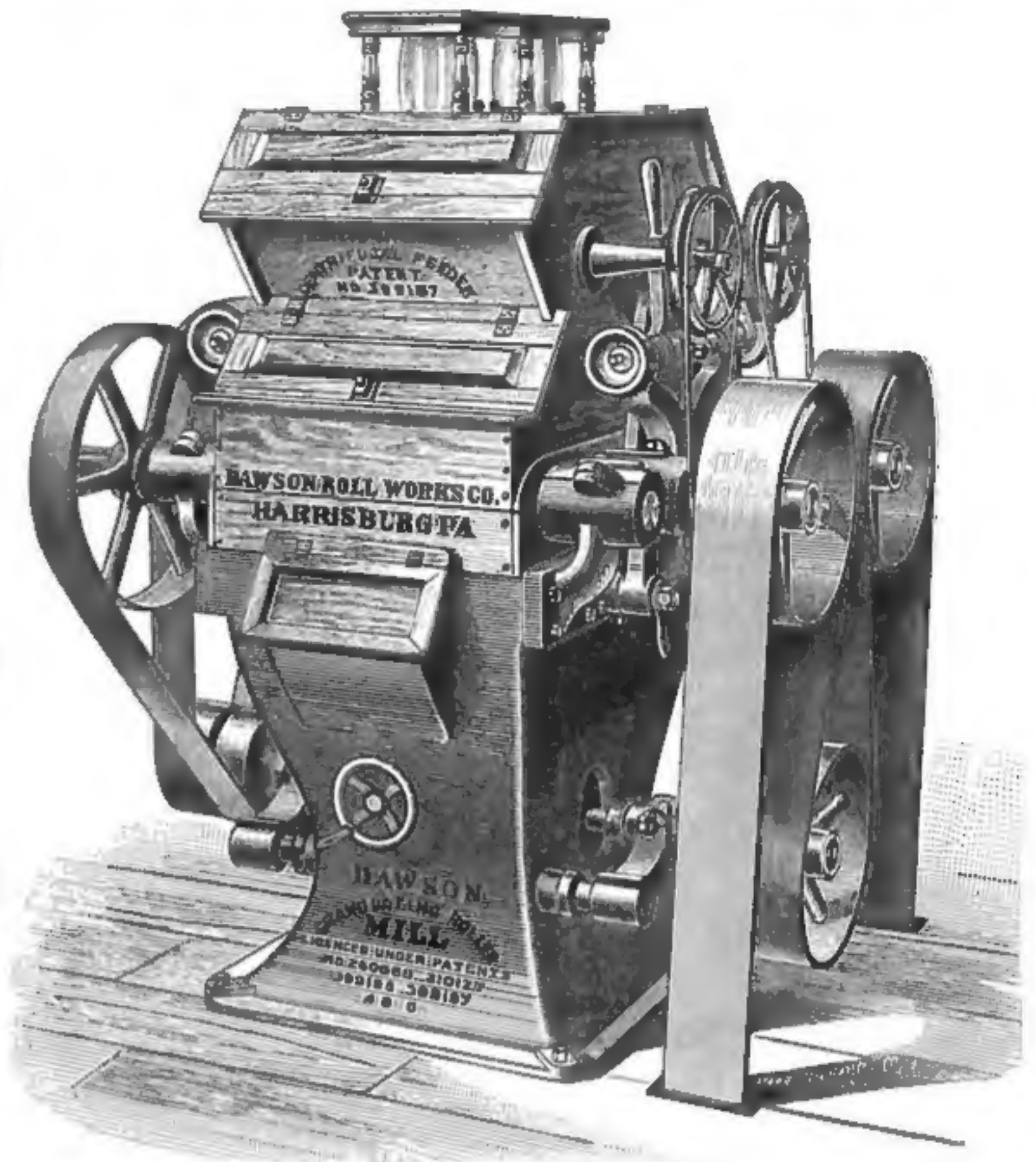
## CHILLED IRON ROLLS

WITH DAWSON PATENT CORRUGATION.

ALL STYLES OF FLOUR MILL ROLLS RE-GROUND AND  
RE-CORRUGATED WITH ANY FORM OF CORRUGATION.

We have had large and extended experience in grinding and corrugating chilled rolls for milling, and have one of the largest and most improved plants in the country for this work, which enables us to meet the most exacting requirements of the trade promptly.

ORDERS AND CORRESPONDENCE SOLICITED.



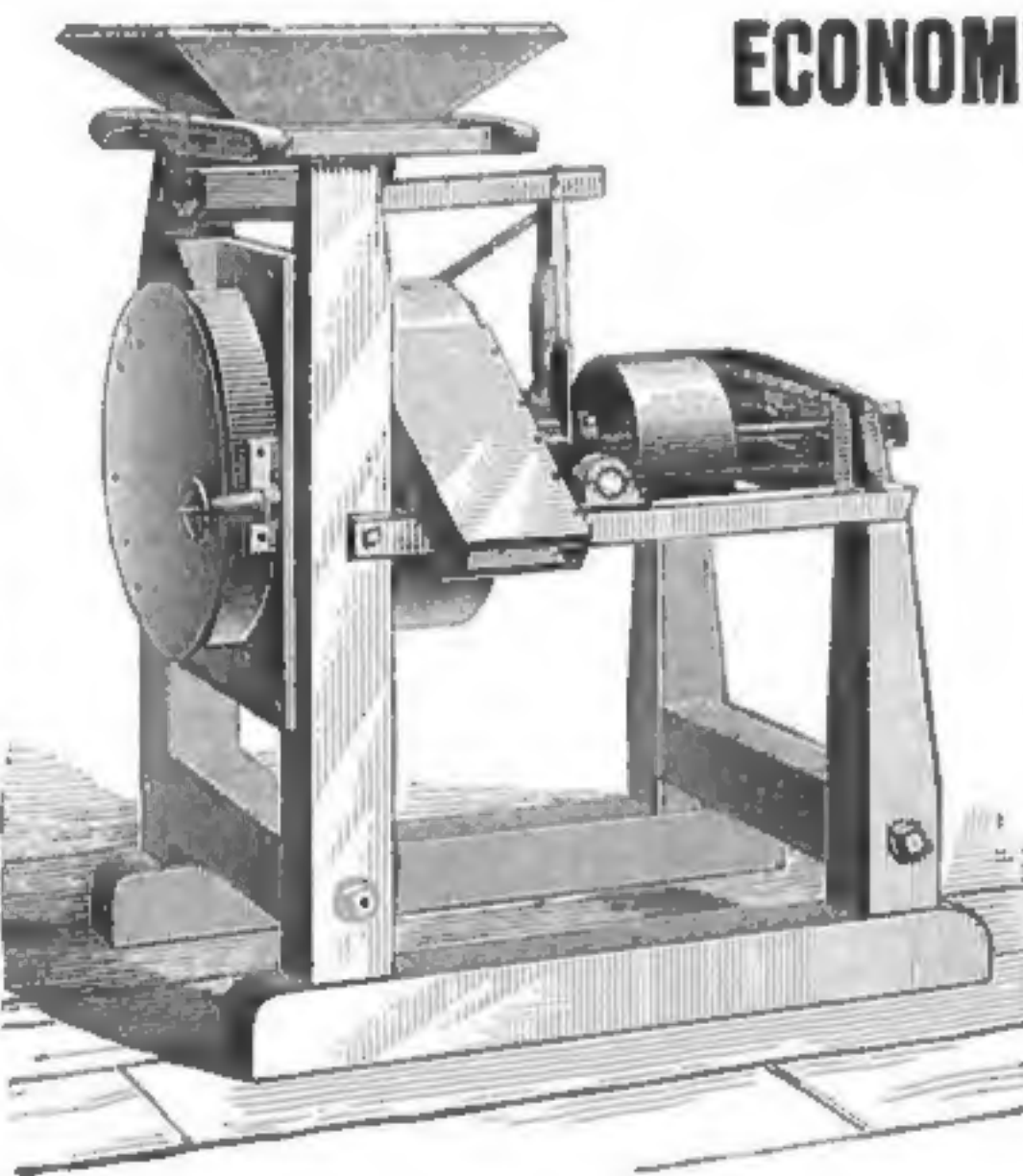
# DAWSON ROLL WORKS CO.

South and Short Streets,

HARRISBURG, PA.

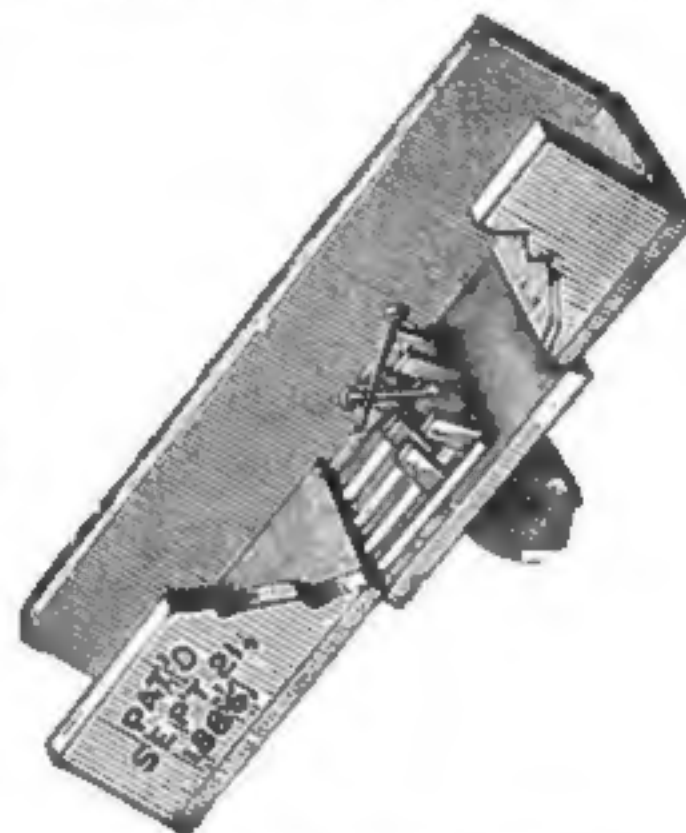
### BARTLETT'S VERTICAL MILL

DEAR SIR:—We have now been using your 18 inch Vertical Mill for several months. It took the place of a 30-inch under-runner. We can grind nearly twice as much grain of all kinds, including clear oats, as we ever could with the 30-inch Mill and with considerable less power. We gladly recommend the mill. Yours truly,  
SHEETS BROTHERS.



### ECONOMIC MAGNETIC SEPARATOR.

Every Miller Should  
Give One a  
Trial.



Durable. Cheap. \$7.00 Thirty Days' Trial.

C. O. BARTLETT, - CLEVELAND, OHIO.

## The Grand Hotel

LOCKPORT, NEW YORK.

Remodeled last year. Refurnished entirely with new and elegant furniture. Fitted with all modern improvements, including Electric Lights, Steam Heat, Call Bells, Elevator, Etc.

FREE BUS TO ALL DAY TRAINS.

W. C. COMSTOCK, PROP.

When Writing to Advertisers Please Mention 'The Milling World.'



WHEN BUYING A BOILER FEEDER  
BUY THE BEST.

Satisfaction ➤

➤ Guaranteed.

WRITE FOR CATALOGUE, PRICES,  
TERMS, ETC.

AMERICAN INJECTOR CO., NO. 175 Larned St., West, DETROIT, MICH.





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Buffalo, N. Y.  
McFAUL & NOLAN, - - - PROPRIETORS.  
THOMAS MC FAUL. JAMES NOLAN.

#### SUBSCRIPTION.

In the United States and Canada, postage prepaid, \$1.50 Per Year, in advance; remit by Postal Order, Registered Letter, or New York Exchange. Currency in unregistered letter at sender's risk.

To all Foreign Countries embraced in the General Postal Union, \$2.25 Per Year, in advance.

Subscribers can have the mailing address of their paper changed as often as they desire. Send both old and new addresses. Those who fail to receive their papers promptly will please notify at once.

#### ADVERTISING.

Rates for ordinary advertising made known on application.

Advertisements of Mills for sale or to rent; Partners, Help or Situation Wanted, or of a similar character One cent per word each insertion, or where four consecutive insertions are ordered at once, the charge will be Three cents per word. No advertisement taken for less than 25 cents. Cash must accompany all orders for advertisements of this class.

Orders for new advertisements should reach this office on Friday morning to insure immediate insertion. Changes for current advertisements should be sent so as to reach this office on Saturday morning.

#### EDITOR'S ANNOUNCEMENTS.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

Correspondents must give their full name and address, not necessarily for publication, but as a guarantee of good faith.

This paper has no connection with a millfurnishing house and aims to represent the trade without prejudice, fear or favor.

Address all communications

**THE MILLING WORLD,**  
BUFFALO, N. Y.

Entered at the Post Office, at Buffalo, N. Y., as mail matter of second-class.

#### SPECIAL ADVERTISEMENTS.

Advertisements of Mills for Sale or Rent, Partners Wanted, Machines for Sale or Exchange, etc., etc., cost 1 cent per word, for one insertion, or 3 cents per word for four insertions. No order taken for less than 25 cents for one insertion, or 50 cents for four insertions. Cash must accompany the order. When replies are ordered sent care of this office 10 cents must be added to pay postage.

#### WANTED, TO RENT.

A good Custom Mill, in a good grain section. Steam or water power. Address, MILLER, P. O. Box 170, Pocomoke City, Worcester County, Md. 252

#### FOR SALE AT A BARGAIN

I have a half interest in a Short System Roller Mill which I will sell at a bargain. Don't write unless you mean business. Address, GEO. FOSTER, Wakeman, O. 47

#### FOR SALE.

A water power Grist Mill, in good condition, good location and well established trade. For full particulars address GEO. H. KECK & SON, Sammonsville, Fulton County, N. Y. 11

#### FOR RENT.

Clinton Mills, at Black Rock, Buffalo, for rent on reasonable terms, recently repaired and put in good order. Apply to CHAS. DANIELS, over 811 Main Street, Buffalo, N. Y. 61f

#### FOR SALE.

Rare chance, Grist, Saw, Planing Mill, Lumber and Coal Yard, doing good business. Growing village; 15 miles from Washington. Owner wishes to retire. Small capital needed. Terms easy. A. FREEMAN, Vienna, Va. 37

#### FOR SALE.

A rare opportunity. A No. 1 full Roller Mill on one of the best water-powers in Iowa. Capacity of mill 100 bbls., all in the best of repair and doing a good business on Merchant work. For particulars address owner, S. F. McDONALD, Oxford Mills, Jones County, Iowa. 1619

#### FOR SALE.

Flour and saw-mill with or without farm of 38 acres. Four buhr mill, with machinery and building in most excellent condition. Buildings on farm good. Good run of custom. Can run by water 9 months, also have steam power. Terms easy. On Big Indian Creek, 1/4-mile from Crandall, on Air Line. Mrs. C. KRACKMAN, Crandall, Ind. 36

#### MILL MACHINERY FOR SALE.

One No. 0 Standard Combined Separator, Smutter and Brush Machine; new, best make.  
One 20-Inch Under-Runner Portable Mill, French Buhr Stone, capacity 10 to 12 bushels per hour; new, best make.  
One 14-Inch Vertical Feed Mill; best make, new, a bargain.  
One No. 6 Dustless Separator; new, a bargain.  
One No. 1 Full Rigged Combined Dustless Separator; new, a bargain.  
Four Corn Cob Crushers, right or left hand, driven from above or below, best make; capacity 40 to 60 bushels per hour.  
Three No. 1 Corn Shellers, capacity 200 to 300 bushels per hour; new.  
One No. 2 Purifier. New. Best make. A bargain.  
One 20-Inch Portable Mill.  
One 18-Inch Double Gear Portable Mill.  
For particulars address, FRANK SMITH, care of THE MILLING WORLD, Buffalo, N. Y. 51f

#### FOR SALE AT A GREAT BARGAIN

The Reist Roller Mill, at Williamsville, 4 1/2 miles from Buffalo city line. Eighteen acres of land, with dwelling houses, twenty-two feet fall stone dam, Leffel Turbine water wheels, water the year round, steam power to assist in extreme dry seasons. Nine set 9x18 Stevens Rolls, two run of stone, three George T. Smith purifiers, grain-cleaners, scalping and bolting capacity for 80 to 100 barrels per twenty-four hours, etc., etc. Title perfect, bought at Sheriff's sale. Mill was mortgaged for \$18,000; will sell for \$5,500, without regard to loss, as I am no miller, but engaged in other business. The quick buyer will secure a great bargain. Address, WILLIS B. MUSSER, Lancaster, Pa., or my attorneys, BAKER, SCHWARTZ & DAKE, Esqs., Hayen Building, Buffalo, N. Y. 912

#### FLOUR MILL WANTED.

Flouring-mill wanted at Evart, Osceola Co., Mich. Good wheat region, large territory. Correspondence solicited. GEO. W. MINCHIN, Evart, Osceola Co., Mich. 89

REPORTS from the winter-wheat regions indicate a general prevalence of the Hessian fly. In some fields, where the favorable weather and early sowing brought the plant well up before the snow fell, this pest is said to be very numerous and destructive. The prevalence of this and other insect pests would largely offset the reported increase in acreage sown to winter wheat in the United States.

ESTIMATES of the crop of spring wheat in North Dakota, South Dakota and Minnesota this year range from 75,000,000 bushels to 95,000,000 bushels. Even the least of those amounts would be a great crop, of which the three States might well be proud. The best authorities agree on 90,000,000 bushels. It seems quite certain that the Northwest ought to be moderately prosperous and comfortable with so much good bread timber stored up.

EVEN Manitoba recedes officially from the 20,000,000-bushel notch for her wheat crop of 1890. The government of that province has issued its third crop bulletin, giving the result of the harvest. The wheat yield is set down at 14,665,769, oats at 9,513,433, and barley at 2,069,415 bushels. Now scale the wheat figures by 25 per cent., and the truth will begin to be visible. Then add the very poor quality, vouched for by indisputable authority, and it will be seen that the "bumper season" that piped so big at the opening has really brought Manitoba out at the diminutive termination of the horn.

CERTAIN superficial American writers never weary of asserting that "the price of wheat in the United States is fixed in London and Liverpool." Such writers ought to stop long enough between their repetitions of that text to ask themselves how it was that the recent financial flurry, originating in London, left the price of wheat in British markets absolutely unchanged, and even firmer, while the price of November wheat in New York sank from \$1.08 to 98 cents. Even now the New York price has not gone back to the notch before the flurry, by 5 or 6 cents, while British prices are even higher than they were before the flurry. American prices appear to have a habit of topping and bottoming in total independence of European influences. At this writing, for example, the situation in wheat the world over implies advanced prices, and European markets are advancing, but American markets are halting and seem ever ready to tumble into the bear-pit just when European markets are decidedly bullish. Our American economists should either abandon their pet theory or else make a study of the facts that qualify it.

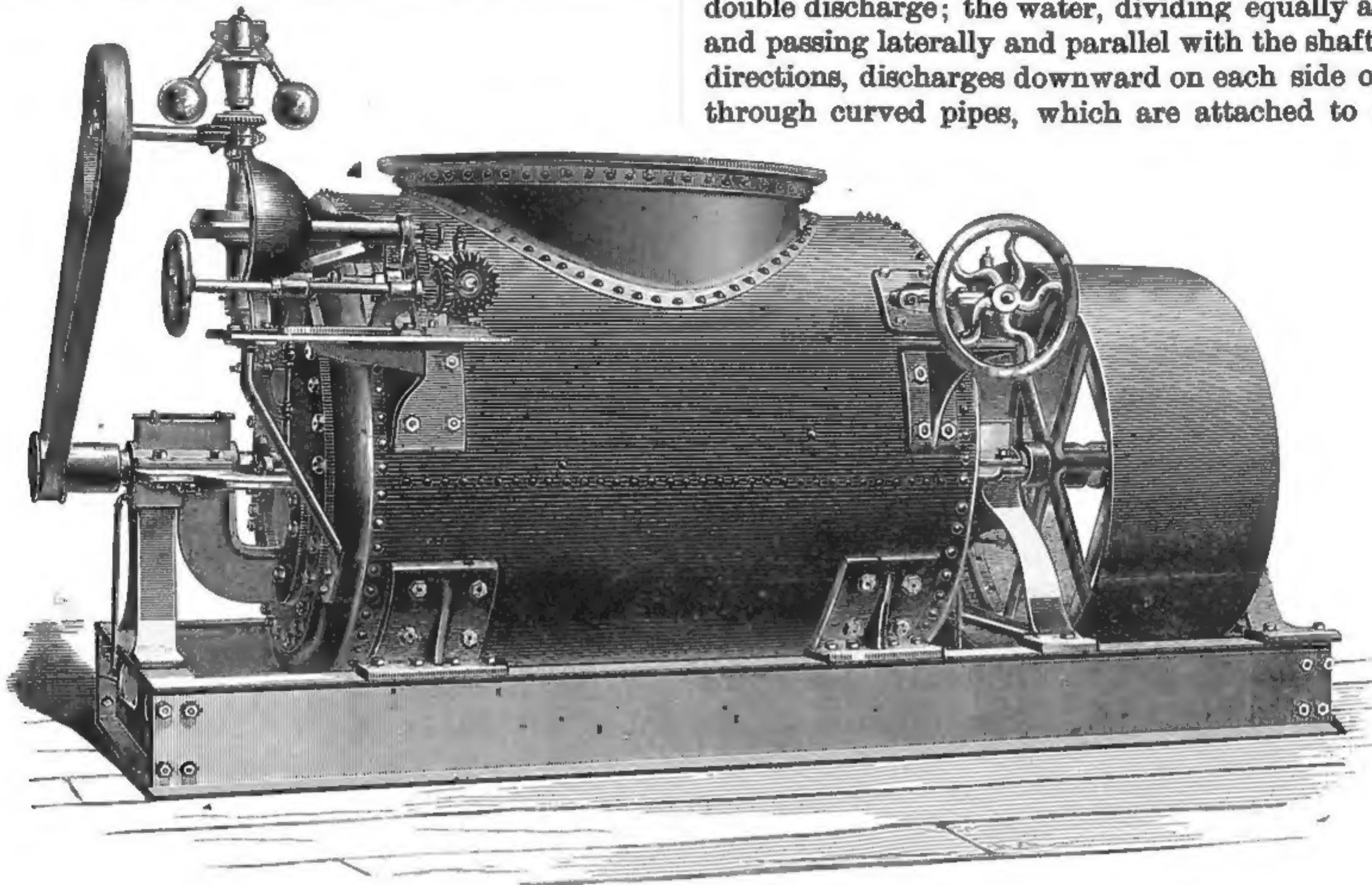
THE Milwaukee "Name" is out with a new wrinkle that more than justifies Editor Cawker's reputation as the "End Man of Milling Journalism." With a generosity born of overwhelming philanthropy, Editor Cawker is offering, for the small sum of \$3.50, to the millers of the United States, a year's subscription to "Nomen, et præterea Nihil," and a magnificent book, "magnificently bound in full satin cloth, embossed in gold, silver and ink from original designs," a really "mammoth work 10 by 7 1/2 inches, and 3 1/2 inches thick, weighing 6 1/2 pounds," and "containing over 800 pages" and "500 engravings by famous artists." This beautiful and valuable mammoth book gives illustrated descriptions of "Asinus Zebra," of "Ammotragas Tragapellaphus," of "Erindæus Europæus," of "Balæna Mysticetus," and of other insects equally attractive to millers. Particular mention is not made of the "Yahoo-Pollino Minneapolisensis," but probably that useless insect is fully described in the volume. The coming Silver Creek "Puck of American Milling Papers" will have to rustle if it proposes to beat the Milwaukee "Nomen, et præterea Nihil" in the work of making the fellows laugh. Milwaukee has become a fountain of mirth, a regular old geyser, as it were, spouting menstrually. All hail to the End Man of all End Men!



**THE JAMES LEFFEL TURBINE WHEEL.**

Herewith are presented two illustrations and a description of the James Leffel turbine water-wheel on a horizontal shaft, manufactured by Messrs. James Leffel and Company, Springfield, Ohio, or No. 110 Liberty street, New York, N. Y. The engravings and description are furnished by the company. In these wheels a conspicuous advantage consists in the total absence of gearing, whereby it becomes a

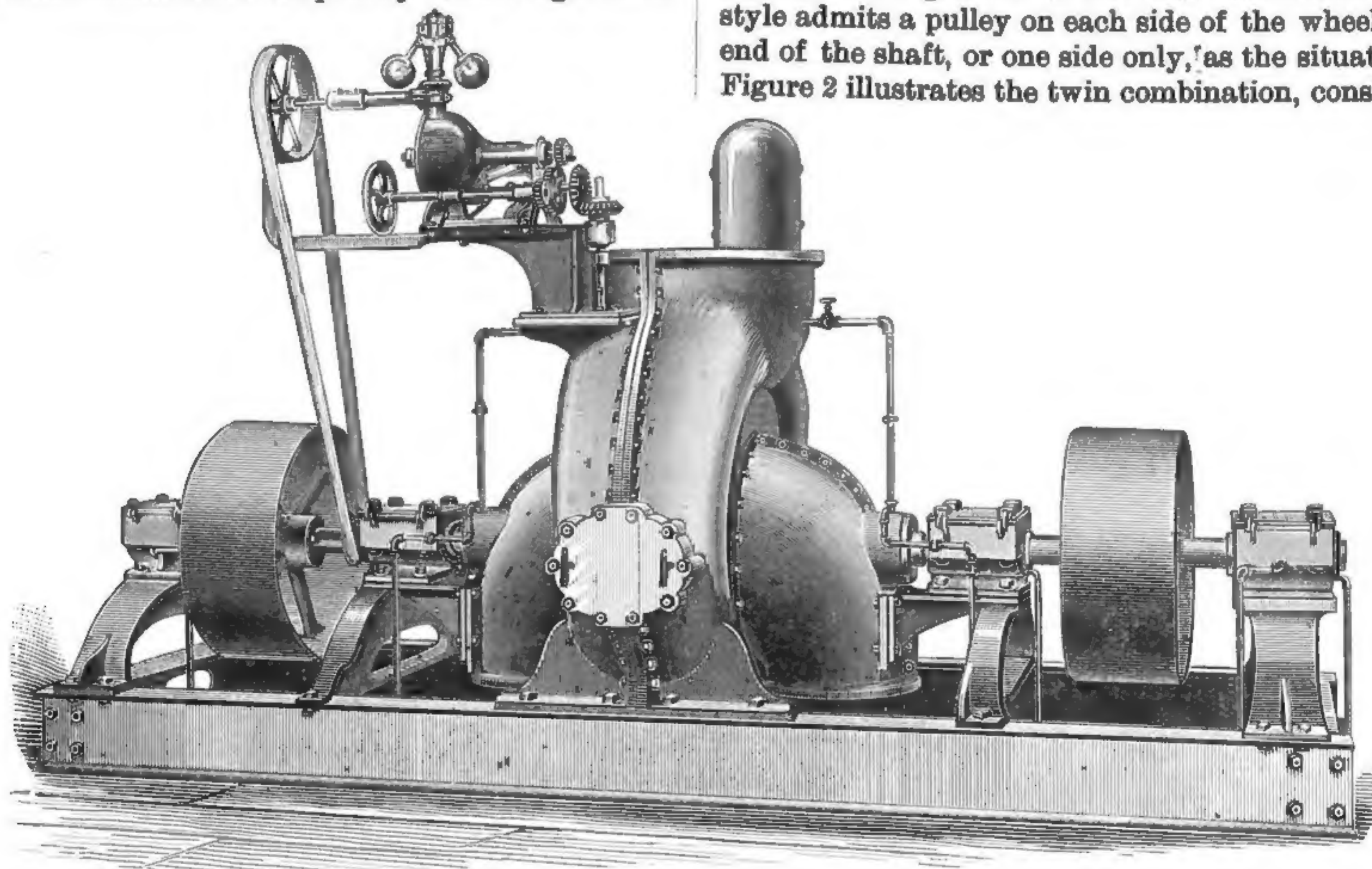
wheel-shaft to the pulley on the saw-mandrel. The illustrations represent two styles of this wheel, of which the company manufacture more than twenty modifications. The wheel journals or bearings are entirely out of water and outside the casing, so they may be run in oil and inspected at any time. Figure 1 shows the exterior casing, enclosing the Leffel wheel modified from the ordinary standard make. The principal feature of this duplex combination is its double discharge; the water, dividing equally at the center and passing laterally and parallel with the shaft in opposite directions, discharges downward on each side of the wheel through curved pipes, which are attached to draft-tubes.



THE LEFFEL TURBINE WATER-WHEEL.—VIEW OF THE EXTERIOR CASING.

simple and easy matter to attach them to any kind of mill in which power is distributed from horizontal main shaft. The connection is made direct to a pulley on the main horizontal, or intermediate, by belting from one or more pulleys on the horizontal shaft of the water-wheel. The application of these turbines occurs more frequently where high heads

The exterior casing is made strong and substantial, but as narrow through the central portion as possible for the purpose of obtaining the shortest distance between the journals, bringing them as near to the wheel as the discharge space will admit, with the object of securing a solid and substantial arrangement in the most condensed form. This style admits a pulley on each side of the wheel, or on each end of the shaft, or one side only, as the situation requires. Figure 2 illustrates the twin combination, consisting of two



THE LEFFEL TURBINE WATER-WHEEL.—TWIN COMBINATION ON HORIZONTAL SHAFT.

and small quantities of water, or very large powers with ordinary head, are to be utilized. They are very often applied and with great success to electric light and power plants, under such conditions, and to milling purposes, as that industry is usually carried on where high heads of water are frequent. They are used to drive paper-mills, circular sawmills and new-process roller flouring-mills. In the sawmills they may be belted directly from the pulley on the

regularly built James Leffel wheels, placed within a large cylindrical wrought-iron casing with cast-iron heads; the wheels discharge toward each other, the streams uniting and passing downward through a single draft-tube. The illustration shows only one pulley, but two may be used, one on each end of the shaft, by merely extending the shaft at the end opposite to that on which the first pulley is secured. These forms also easily permit the attaching of the



head-pipe at any angle from horizontal to perpendicular. These general styles of wheel may be used with or without a governor, and may be modified to suit any combination of circumstances. In recent years Jas. Leffel and Company have designed and built new shops, put in new and specially arranged machinery, provided new iron and wooden patterns, and availed themselves of the latest appliances for their work. They are therefore able to construct the James Leffel water-wheel in the best possible manner and with such improvements as an experience of nearly 30 years enables them to supply. They confidently recommend their wheels to any situation where it is possible for a turbine to operate, and they guarantee a successful performance wherever their advice is followed.

#### POINTS IN MILLING.

EXPLOSION after explosion of flour-dust, wood-dust and fiber-dust of various sorts teaches operatives little or nothing. A hears that B carried an open light into a dusty place and was "fired out" of that place by a terrific explosion. A knows that B caused his own misfortune, yet A will within a week carry an open light into a dusty room in his mill, just as B did, and he will get "fired out," singed, bruised and burned, just as B did. The report of the accidents to A and B will be read by C and all other millers down to Z, but while A and B, who "have been through the mill," may refrain from repeating the open-light-in-the-dust-room act, it is quite safe to predict that C and D, and all the rest, will do just the same thing and meet the same fate. Let millers, and all others who work in dusty buildings, flour-mills, wood-working shops and candy factories in particular, and others in general, remember that almost any sort of fine dust floating in air is explosive when the proportion of dust to air reaches a certain percentage, and that only the open light is needed to precipitate the explosion.

THE miller who hears the baker grumble over the "small profits in baking" ought to call for a comparison of baking with milling. The miller can figure to a nicety the cost of the 4:30, the 4:40, the 4:5 or the 5 of wheat he must grind to make 196 pounds of flour, and he can tell to a cent what he gets for the 196 pounds. His margin is a thing that can not be concealed. On the other hand, the baker takes the 196 pounds of flour and, by the addition of water and other substances, turns it into—how many pounds of bread? The miller can, of necessity, make but a few cents on the barrel of flour. It would be an interesting showing were some honest and intelligent baker to make an accurate computation of the cost of converting a barrel of flour into bread, giving the total received for the bread, and thus measuring the profits derived by the men who utilize the finished product of the mills. Grain turned into whiskey shows enormous profits for the distiller, the brewer, the seller and the retailer. Flour turned into bread ought to show large profits for the baker, whatever may be the truth concerning the margin of the miller who converts the grain into flour.

AMERICAN spring wheat samples examined and analyzed in Europe showed an average of 87 per cent. starch and albuminoids, and 9 per cent. of moisture, and 4 per cent. of fiber. Red winter wheats showed 11 per cent. of moisture. These showings were made after the American wheats had been carried across the Atlantic, and probably the transportation was responsible for some of the moisture shown. English wheats in comparison showed over 14 per cent. of moisture. The same experiments and analyses show that wheat outranks other cereals in its proportion of nitrogenous compounds, wheat showing 23, barley 14, oats 11, corn 7 and rice 3.

WHEAT bran contains 12 per cent. of insoluble fiber, rendering much of the bran absolutely indigestible by the human stomach. It is this fiber which forever unfits bran for human food, notwithstanding the claim of the bran-faddists that "the bran is the most valuable part of the wheat grain

for human food." No sane man can believe that the introduction of an utterly insoluble, indigestible, non-assimilable substance into the stomach and intestines is a safe or proper performance for sane persons. This insoluble matter not only irritates the intestines and causes diarrhoea and other troubles, but it also by its presence prevents the perfect solution, digestion and assimilation of the true food portions of the berry. Thus it works a double injury. Yet the bran-faddists insist that bran is a good and wholesome food.

THE strength of wheat lies mainly in the not easily soluble albuminoid substances contained in it. The washing away of the starch leaves crude gluten, but at least 20 per cent. of this gluten may be dissolved easily in water by further washing, leaving 80 per cent. not soluble in water except by longer immersion. It is this portion of the gluten that constitutes the "strength" of wheat flour. Of the gluten cells in the wheat berry, the outer layers contain more gluten and less starch than the inner layers, implying that the weakest flour comes from nearest the middle of the grain, and the strongest flour from nearest the outside of the grain. Investigation has shown that center flour contains 8 parts of gluten in 100, the next outer layer contains 9 in 100, the next outer layer 11 in 100, and the extreme outer layers 13 in 100 parts. The superior strength of the outer layers is due to the more perfect maturity of those layers. Growth proceeds from the center of the grain, making the outer layers older, and they are also exposed more fully to the action of the sun and air in growing, all meaning a higher development and maturity. The varying quality of the same wheat on the same land in different seasons may be understood in the light of these facts. Conditions that in one season may develop the gluten and other parts fully may be wholly or partly wanting in the next season, making a decided change in the bread-making and flouring value of the grain.

GRADUAL reduction milling puts a severe test on wheat grain. The first breaks produce flour containing the layers of greatest strength, and succeeding breaks necessarily produce flour from the weaker inner layers. The greater the number of breaks, the weaker must be the last products, the weakest being that from the very center of the grain. Chop from the bran-cleaning rolls will produce flour full of gluten, because that flour is mainly composed of the outer layers of gluten cells. Bran-flour and break-flour comparatively tested, by either washing or baking, will show the superiority of the bran-flour over the break-flour in gluten. The baking test will show from a given weight of bran-flour a tough, fibrous, porous, large loaf, while the same weight of break-flour will yield a smaller, whiter, closer-textured and fiberless loaf. The difference in color will be very marked, and the difference in taste will be quite as marked. Flour from each succeeding break will be whiter, freer from fiber, less and less strongly flavored and weaker. Some of the Hungarian flours of exceeding whiteness, the result of long-system reduction, are practically destitute of gluten and fiber. American practice has always stopped short of absolute fineness in reduction, and the success of American flours in Europe has at last had its influence on Hungarian millers, who have recently abandoned their excessively long and elaborate system for one that will yield flour sufficiently fine for the fine grades of bread and pastry, and sufficiently strong to dispense with the admixture of lower grades for baking.

THE miller who thoroughly understands the make-up of wheat grain will have a sharp eye always to the earlier breaks, as those breaks directly concern the strength of the flour. The careless grinder may grind the best and strongest of grain and turn out weak flour, unless he knows where to look for the element of strength and knows how to save that element from the bran-pile. He can not afford to be ignorant of, or to ignore, the real value of the outer layers of gluten cells in the grain. Under the old stone system the motto was: "Everything goes." The one smash in-



cluded bran, epicarp, endocarp, testa, embryonic membrane, gluten cells, germ and starch cells in one mass, and upon the bolts was thrown the work of separating the starch and gluten from the rest of the mass. Naturally and necessarily, the separation was at best only imperfect, for the crease-dirt, awns, fiber, bran and other non-floury parts were smashed together with the floury parts, and all the finer parts, whatever their nature, went through together as flour. Such flour would naturally be "strong" flour, if not "fine" flour. Modern roller process milling has entirely changed all this, and the miller who longs for the "nutty flavor" and "rich color" of "old-time flour" must not let his longings interfere with his watchfulness over his rolls and purifiers.

#### OREGON FLOUR IN JAPAN.

Concerning the increase of the flour trade of Oregon with Japan, the "Oregonian," Portland, Oregon, says: As China and Japan are becoming large consumers of Oregon flour, 400 tons having been shipped by each steamer of late, and, as a trade is being built up between this port and those countries, and it has been predicted that they will, within ten years, consume the entire output of wheat of the Pacific coast, anything from those regions in regard to the introduction of flour, and how it is growing in favor there, will be of interest to the people of Oregon. To many who have eaten bread all their lives and have always heard it spoken of as the staff of life, and to whom life would hardly be worth living without it, it may seem strange to talk of flour or bread being introduced and growing in favor; but they must remember that the greater part of the millions of Chinese and Japanese have always used rice in place of bread, and have found it the staff of life, and it has been claimed by many that it would be as impossible to induce these people to abandon rice in favor of wheaten bread as it would be to induce Americans to substitute rice for bread. Failure of the rice crops and consequent famine in China and Japan have been the means of introducing American flour into those countries more rapidly than anything else could have done, and now the Portland Flouring Mills Company and the Oregon Milling Company are shipping 400 tons of flour by each steamer. In regard to the manner in which the flour is cooked and eaten, the Japan "Daily Herald," of Yokohama, says:

"Most remarkable is the universal favor that bread and similar floury concoctions are beginning to enjoy. This article of food has also been completely Japanized and sells in forms unknown to westerners. Tsuke-pan, sold by peripatetic vendors, who push their wares along in a tiny roofed hand-cart, is much liked by the poorer classes. It consists of slices, thick, generous slices, of bread dipped in soy and brown sugar and then fried or toasted. Each slice has a skewer passed through it, which the buyer returns after demolishing the bread. One can not speak highly of this bread. The dough is heavy, and the color is an unhealthy yellowish-gray. But the best Japanese flour is equal, I am told, to California No. 3, which is high praise, indeed. [California No. 3 would be considered a very poor article here.] Flour is now used in many other ways besides the manufacture of simple bread. There is kashi-pan, 'cake-bread,' which is sold everywhere. As the name implies, it is a sort of sweet breadstuff made into cakes of various sizes and artistic figures, according to the skill and fancy of the baker. To a European palate this kashi-pan is rather dry and tasteless, 'too much crumb,' as the precious youth said of Sairey Gamp. But it is very cheap, and for 5 sen one can get a huge paper bag full. Kasuleira, or sponge-cake, is not so much sought after as it used to be. Yet some bakeries, such as the Fugetsu-do and Tsuboya, excel in producing the lightest and most delicious of sponge-cake."

#### THE FRUIT OF THE TREE.

Intelligent and unprejudiced observers have, from the beginning of the governmental interference with railroad enterprise and management, seen but one possible or probable result of that interference. Such observers, free from the

bias of demagoguery, looking only at justice, and knowing that business can not be regulated by the legislation of men totally ignorant of business, have systematically predicted that the Interstate Commerce Act will achieve results directly opposite to those desired and foretold. The event justifies their comments. That law has benefited nobody. It has built up no industry, no community. It has hurt the railroads, and it has not helped the public. Rates for freight and passenger traffic have not been reduced to help the public, and business has been cut down, to the loss of the railroads. Even the men who forced the creation and enactment of the law begin to see that it is hurting them. For instance, in Iowa, where the anti-railroad spirit has been most rampant and taken the most insane form, there is now a growing opinion that the Interstate Commerce Act has been a serious injury to the State. Already the citizens of that commonwealth are pointing to a number of their most prominent manufacturing enterprises whose buildings and property are now tenantless, and they are ready to credit the operations of the act with this unhappy result. In nearly every instance the manufacturers have removed to the vicinity of Chicago, in order to get the benefit of the transportation facilities of that locality. This is a practical illustration of the truth of the statement made by its critics when national railroad legislation was first seriously discussed, that it would result in a relocation of industries, in which favorably situated communities would reap enormous advantages at the expense of less fortunate sections.

The loss to Iowa and other similarly situated States through this law will not be all loss, if the citizens of those States learn thereby that it is not a proper or profitable procedure to make private property and business the subject of directly hostile legislation. The Interstate Commerce Act is a disastrous infliction upon important interests, and the early repeal of the act is all that will save those interests from virtual extinction. Iowa and other States will lose, and they will deserve to lose, manufacturing establishments, citizens, wealth-productive capacity and even created and amassed wealth, if they persist in their present insane course against the very roads that make their existence possible. The fiasco of the Interstate Commerce Act ought to be a sufficient preventive of that other monumental folly just now proposed, the assumption of the telegraph interests of the United States by the government. The same eternal laws that have made the anti-railroad government meddling a disaster, will operate to make an even more pronounced disaster of the proposed governmental telegraph business. Railroads and telegraphs are properly private enterprises, and as such they are free from the political corruption that will be inevitable under national administration. Every business man in the United States should declare for a "hands off" policy towards the railroads and telegraphs. The forbidding of competition by law has hurt the public, hurt the roads, hurt the general business and depreciated the value of gigantic investments, and all without an iota of good to a single individual in the United States. With Iowans getting their eyes opened, there is hope for the rest of the country. Light can not break too soon.

#### CANADIAN MILLERS IN COUNCIL.

Following is a report of a millers' meeting at Campbellford, Ontario, Canada, December 10th: The Midland Millers' Association was in session here to-day, and among those present there were: Messrs. T. Peplow, Petersborough, president; D. McLean, Lakefield, secretary Midland Association; E. Plewes, Brantford, secretary Dominion Association; John Hall, Lakesfield; R. Raybourn, Deseronto; J. H. Sills, Myersburg; Chas. Smith, Campbellford. One of the members asserted he had evidence that the Canadian Pacific railroad had brought a car of flour (twenty tons) from Winnipeg to Kingston for a Winnipeg miller for \$110 freight, while at the same time the Canadian Pacific railroad would charge \$180 for the same weight of wheat, thereby giving the Winnipeg miller a preferential freight equal to 10 cents per bushel. It was decided to bring that matter up at the meeting of the Dominion Millers' Association to be held in



Toronto the second Tuesday of January next. It was also decided to recommend the Dominion Association to employ a central wheat buyer. The export of cheap strong flour to London, Eng., was discussed, and the Dominion secretary Mr. D. Plewes, was asked to open up this trade all he could this winter. Other items of interest to the millers and farmers were talked over, after which the meeting adjourned until next March, when the meeting will be held in Lindsay.

#### TROUBLE IN MANITOBA.

According to a recent letter from Winnipeg, Manitoba, a row is brewing in grain circles in that country. Excepting the Ogilvies and Lake of the Woods Milling Company, all the country dealers have suspended business. It is alleged that the Canadian Pacific is giving these corporations special facilities, so that they can afford to pay more than the grain is worth, with the object of booming the country and Canadian Pacific stock in particular. At Brandon the grain-buyers all deserted the street on December 5th and left the Lake of the Woods Company to take all the wheat. It is thought among them that, as this mill is owned by Canadian Pacific men, the milling company is only used as a lever to keep prices up so high that other dealers can not get any wheat. The buyers have decided to give it all to them until freight rates are reduced to the eastern markets.

CANADIAN cereal crop exaggerations are being revealed all along the line. The Agricultural Bureau of Ontario sends out the following: "The results of the threshing are disappointing. The wet weather of June and July caused considerable rust, which resulted in a more or less shrunken grain. The revised estimates of cereal crops show lower yields than the estimates of August, but it is only in spring wheat and oats that the decrease is material. The wheat was injured in the ripening stage, a few days following the date of August returns, and the effect of the blight upon oats was not fully recognized until the threshing season opened. As a consequence, the yield of spring wheat is 2,000,000 and of oats nearly 3,000,000 bushels less than the August estimate." This is a material reduction, and there is reason to believe that even it does not fully measure the discount that should be made on the earlier Ontario claims for the wheat crop.

#### TO TEST THE ELEVATOR LAW.

According to a New York city report, a meeting of canal boat captains and others was held at Kingston Hall, No. 10 South street, for the purpose of devising means for raising funds "to pay counsel to represent our commercial interest at the coming trial of constitutionality of the grain elevator case, soon to occur at Washington." On motion W. S. Clary was elected chairman and M. E. Riley secretary. The chairman explained the position of the elevator bill at present. In the winter of 1887-8, he said, the boatmen secured the passage of the Grain Elevator Law. Shortly after the elevator men began a fight against the bill. They prevailed upon two men to start a test suit against the violation of the law, and Edward Annan and Mr. Pinto were arrested and taken before Justice Walsh. The case was appealed. At

Poughkeepsie it was tried before the Supreme Court, and later on at the Court of Appeals at Albany, at both of which trials the constitutionality of the law was upheld. The elevator men have now appealed to the United States Supreme Court, and have employed Mr. Benjamin F. Tracy to plead the case for them. They would, the speaker thought, no doubt have other eminent counsel. The case would be argued on different lines from those of the lower courts, inasmuch as the presiding judges of the latter were New York State men and had State pride in them. The matter is, therefore, a most serious one. The lawyer who had represented the boatmen in previous trials had been fully paid, but there is no money to pay counsel to look after the matter at Washington, and the object of the meeting was to raise such money.

#### A NEW METHOD OF TREATING DISEASE.

##### HOSPITAL REMEDIES.

What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, has ruined more stomachs than alcohol. A circular describing these new remedies is sent free on receipt of stamp to pay postage by Hospital Remedy Company, Toronto, Canada, sole proprietors.

Es Mueller & Barry, St. Louis, Mo., have ordered from The Case Mfg. Co., Columbus, O., 2 automatic feeds to be placed on Dawson rolls in the Woerstman Mill Co.'s mill at Nashville, Ill.

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# Practical Notes

**SHAPING METAL BY ELECTRICITY.**—By a new device pieces of metal may be shaped with rapidity by being forced under dies while rendered soft or plastic by an electric current.

## GENERAL NOTES.

THERE are about 60,000,000 parts in a single feather of an eagle. The parts are: 2,000 rami, 5,500,000 radii and 54,000,000 chilla and hooklets.

### MILLING PATENTS.

Among the patents granted December 9th, 1890, are the following:

The Buffalo Milling Co., Limited, Lewisburg, Pa., registered trade-mark No. 18,685, the word "Oriole," applied to wheat flour.

The Sessinghaus Milling Co., St. Louis, Mo., registered trade-mark No. 18,689, the letters "S S S S," applied to wheat flour.

Frank Orr, East Springfield, O., No. 442,134, a grain-meter, comprising the combination, with a shaft having a gear-wheel and locking-bolt adapted to hold said gear-wheel against rotation, of a trip-arm having connection with said locking-bolt, an auger-shaft provided with blades, valves and a measuring-chamber, and a mutilated gear-wheel on the said auger shaft, provided with a cam-finger to effect a disengagement of the locking-bolt from the said gear-wheel prior to the meshing of the teeth on the gear-wheels.

Daniel Wilde, Washington, Ia., No. 442,159, a grain-elevator, comprising the combination, with a rectangular tubular frame having an endless carrier mounted upon sprocket-wheels or supporting-pulleys at the four corners of said frame, of discharge-spouts mounted detachably and interchangeably at the upper corners of said frame.

Leroy Ritchie, Fairhaven, Minn., No. 442,202, a flour-chest, comprising the combination, with a casing closed on all sides except a rectangular hole in its face and a strip across the upper edge of said hole, of a bin comprising a front fitting said hole, a strip across the upper edge of said front, and a semicircular bottom and a curved back secured to said front, an upper pivot-pin depending from said casing-strip and passing loosely through a hole in said front strip, and a lower pivot screwing upwardly through the bottom of the casing and engaging a socket in the bottom of the bin.

Newton C. Gauntt, Bowling Green, Ky., No. 442,371, a bran-packer, comprising a main frame, a main shaft, a driving-pulley carried in bearings thereon, a packing mechanism comprising a vertical tube connected to the frame, a revolving packer and stirrer moving in such tube, a bag-holding tube located in line below such packing-tube and carried upon an auxiliary frame having a vertical movement within the main frame, a counter-shaft also carried on such main frame and having a bearing at one end in a swinging arm, a friction-wheel mounted on such shaft, and chains connecting such counter-shaft to the sliding frame, with means for throwing the friction-wheel in contact with the main driving-wheel for operating the bag-lifting mechanism and bran-packing mechanism at one and the same time.

George Walter, Grand Forks, North Dakota, No. 442,212, a middlings-purifier, comprising the combination of an up-right shaft adapted to rotate in suitable bearings, suitable frames fixed upon said shaft, circular sieves hung loosely from said frames and independent of each other, means for rotating said shaft and therewith said frames and sieves, cams adapted to rotate independently upon said shaft, said cams being yieldingly connected with their respective sieves, means for rotating said cams, whereby said sieves are moved laterally in respect to said shaft, suitable receiv-

ing-chambers beneath each of the several sieves, each of said chambers communicating with the chamber of the sieve next below it, said sieves being provided with suitable receiving-troughs and discharge-pockets, valves in said pockets, means for operating said valves, and suitable hopper-spouts adapted to receive the contents of said pockets when said valves are opened, a feed-spout through which the stock is applied to the upper sieve, means for regulating the discharge of the stock therefrom, suitable cleaning-brushes adapted to clean said sieves as they are revolved, a suitable hopper-spout in the floor of the lowest chamber, and suitable revolving brushes for sweeping the stock into the same as it falls through the lowest sieve, and means for creating, maintaining and directing and regulating a current of air flowing upwardly through said chambers and sieves.

Heman W. Stone, jr., Morris, Minn., re-issue No. 11,132, original No. 375,782, a middlings-purifier, comprising the combination with a casing, the riddle consisting of a series of screens of varying-sized mesh, all of said screens being on the same plane, downwardly-inclined separate plates extending longitudinally of the casing below the riddle, said plates being arranged one above the other with a space separating their adjoining edges, whereby the meal can pass from the riddle onto the plates and then pass from one plate to the other, a suction-fan located at the top of the casing above the riddle and providing an ascending current of air through the riddle, conveyer-boxes below the plates and receiving the meal therefrom, and hinged deflector-plates registering vertically with one of the divisions of the riddle above.

### STEAM-INJECTOR.

440,183. Horace B. Murdock, Detroit, Mich., assignor to the American Injector Company, same place. Filed July 26, 1889. Serial No. 318,742. Dated Nov. 11, 1890.

CLAIM 1. An injector provided with two series of steam-valves, force-tubes, and overflow-valves, all said valves connected with a single actuating-shaft adapted to move them equally and simultaneously.

2. An injector consisting of the combination, with two series of steam-valves, force-tubes, and overflow-valves adapted to act successively on the feed-water, of an actuating-shaft to which all said valves are engaged and which operates them simultaneously, said valves and their valve-seats so adjusted with respect to each other that as the actuating-shaft is moved the primary steam-valve will open a steam-passage in advance of the secondary, and the primary overflow-valve will close its escape-passage in advance of the secondary.

3. In an injector, the combination, with two parallel series of steam-valves, force-tubes, and overflow-valves arranged to act successively on the column of feed-water, of a parallel actuating-shaft to which all said valves are engaged, the primary overflow-valve and the secondary steam-valve each having a close-fitting socket or sleeve in advance of its valve-seat, whereby as the valves are simultaneously moved a steam-passage is opened through the primary steam-valve in advance of the secondary steam-valve and the escape of water through the primary overflow-valve is cut off in advance of that through the secondary overflow-valve.

4. In an injector, the combination, with two parallel series of steam-valves, force-tubes, and overflow-valves, of an actuating-shaft parallel thereto, with which all said valves are engaged, said shaft tapped through a stationary support, and a handle for turning it in its said support, whereby said valves are actuated.

### INJECTOR.

440,184. Horace B. Murdock, Detroit, Mich., assignor to the American Injector Company, same place. Filed July 26, 1889. Serial No. 318,743. Dated Nov. 11, 1890.

CLAIM 1. The combination, in an injector, of a fixed delivery-tube extending from the delivery-chamber into the overflow-chamber, conduits upon its exterior communicating from one chamber to the other, and an automatic valve adapted to close the lower ends of said conduits.

2. In an injector, the combination of its delivery-tube extended from the delivery-chamber up through the dividing wall or flange into the overflow-chamber, conduits exterior to the tube communicating between the two chambers, a valve adapted to close the lower ends of the conduits, and a petcock communicating with said delivery-chamber.

3. In an injector, the combination, with its case, of a delivery-tube projecting from the delivery-chamber up into the overflow-chamber and adapted to close the opening between the two chambers, conduits exterior to the bore of the delivery-tube communicating from one chamber to the other, a valve adapted to close the lower ends of said conduits, and a perforated plug adapted to screw into the case from beneath and hold the delivery-tube in place.

4. In an injector, a delivery-tube provided with an orifice  $e_2$  at one side of the same, and a swinging valve  $E'$ , journaled to said tube and adapted to cover said orifice.

5. The combination, with the delivery-tube provided with the opening  $e_2$  and hinged valve  $E'$ , of the lip  $E_2$ .

6. The injector consisting of case A, the combining-tube, a delivery-tube extending from the delivery-chamber up through the overflow-chamber into a cavity at the base of the combining-tube, and in connection therewith the valve  $E'$ , orifice  $e_4$ , valve  $e_5$ , retaining-plug, and petcock.

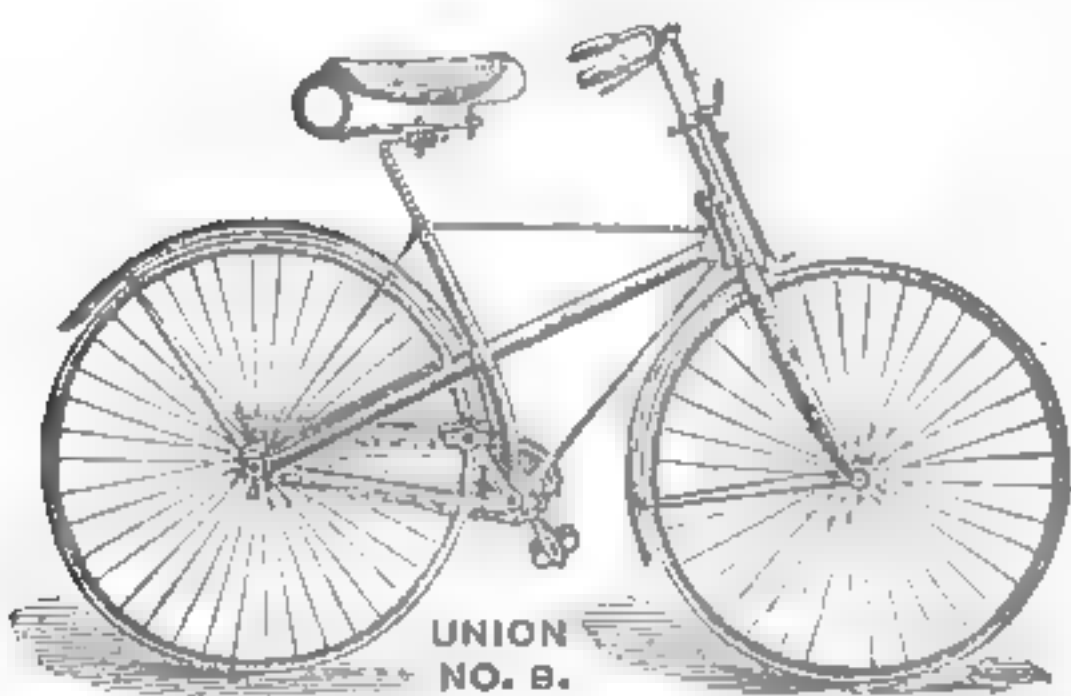
7. In an injector, the combination, with a petcock at the bottom thereof, of a fin  $j$ , turned in toward its stem and adapted to prevent the unscrewing and loss of the petcock.



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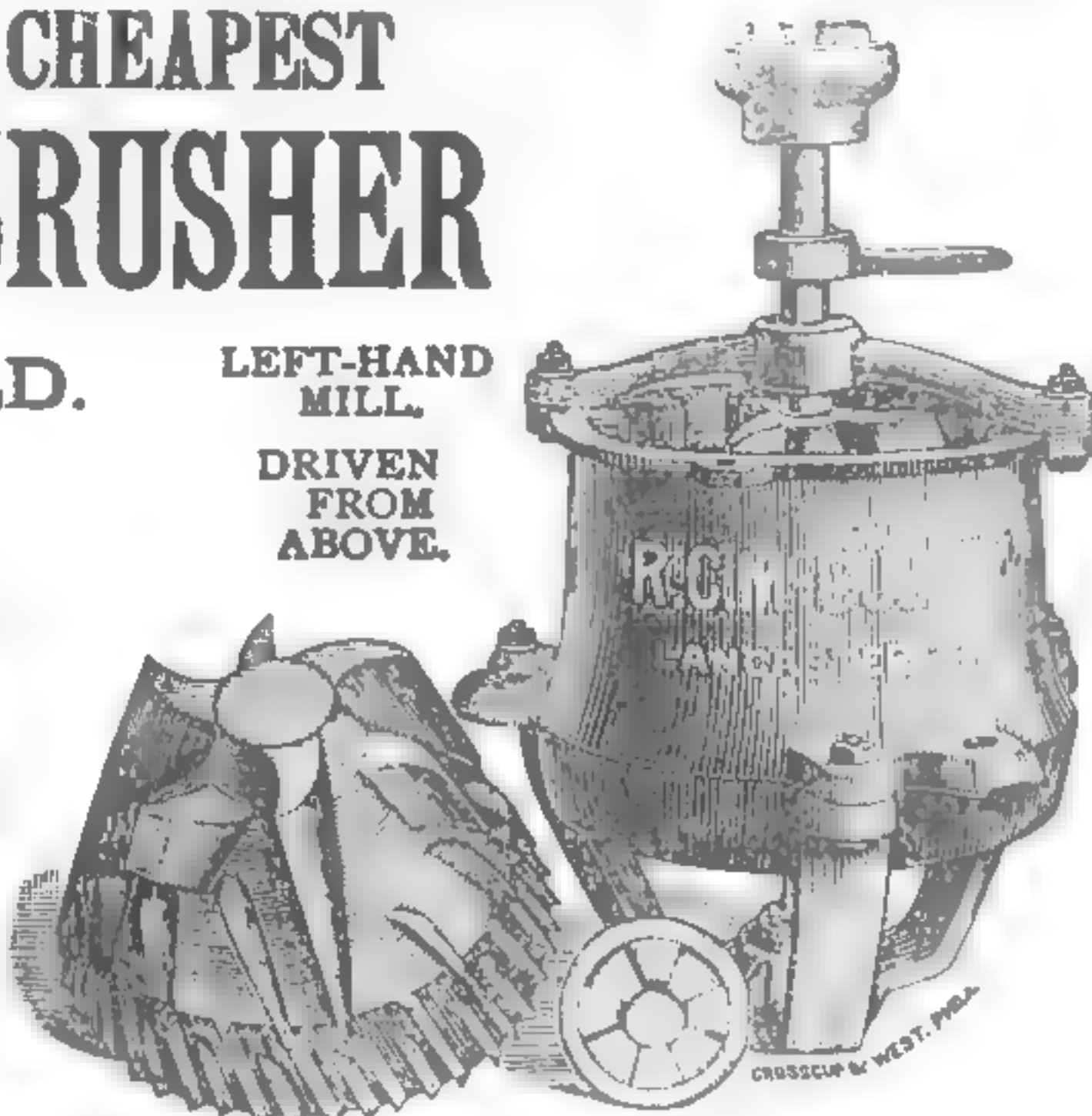
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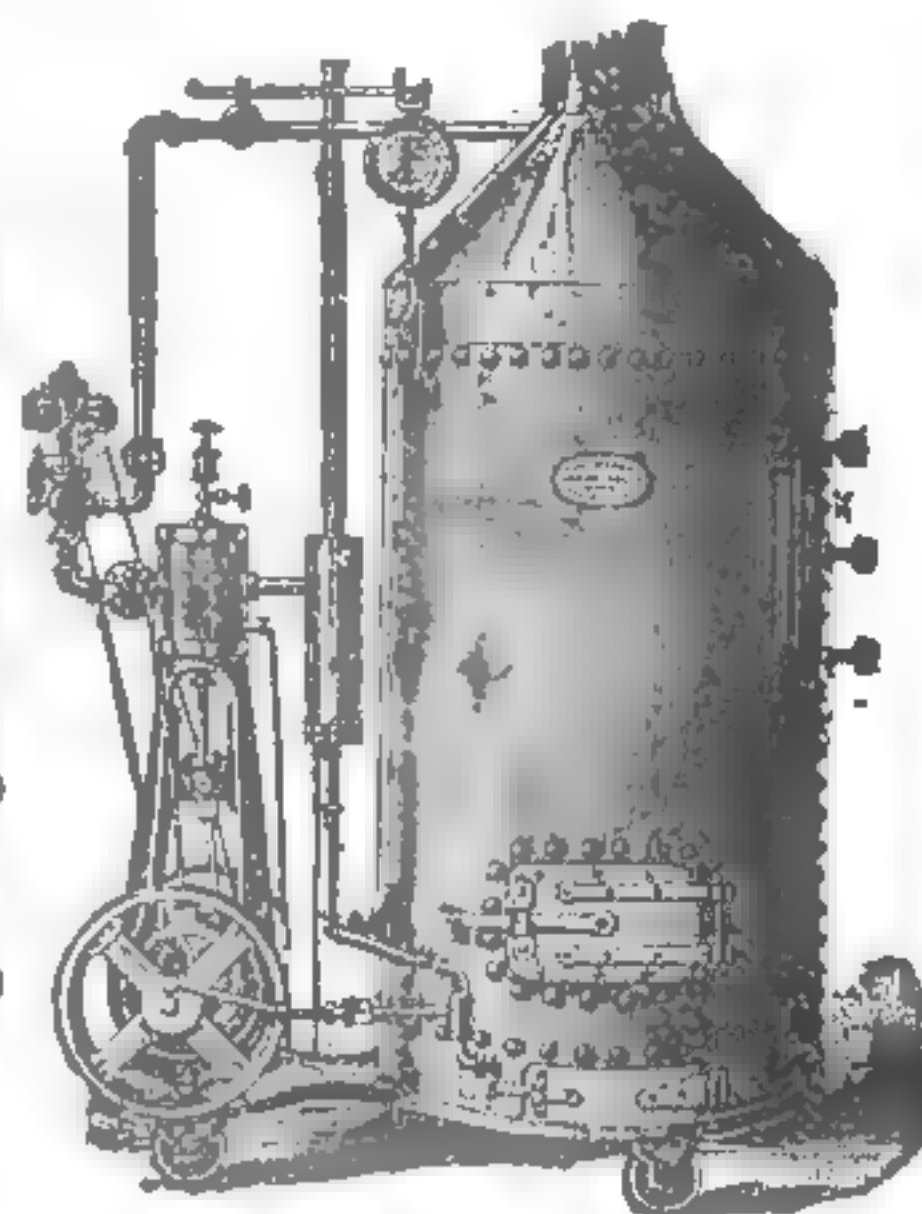
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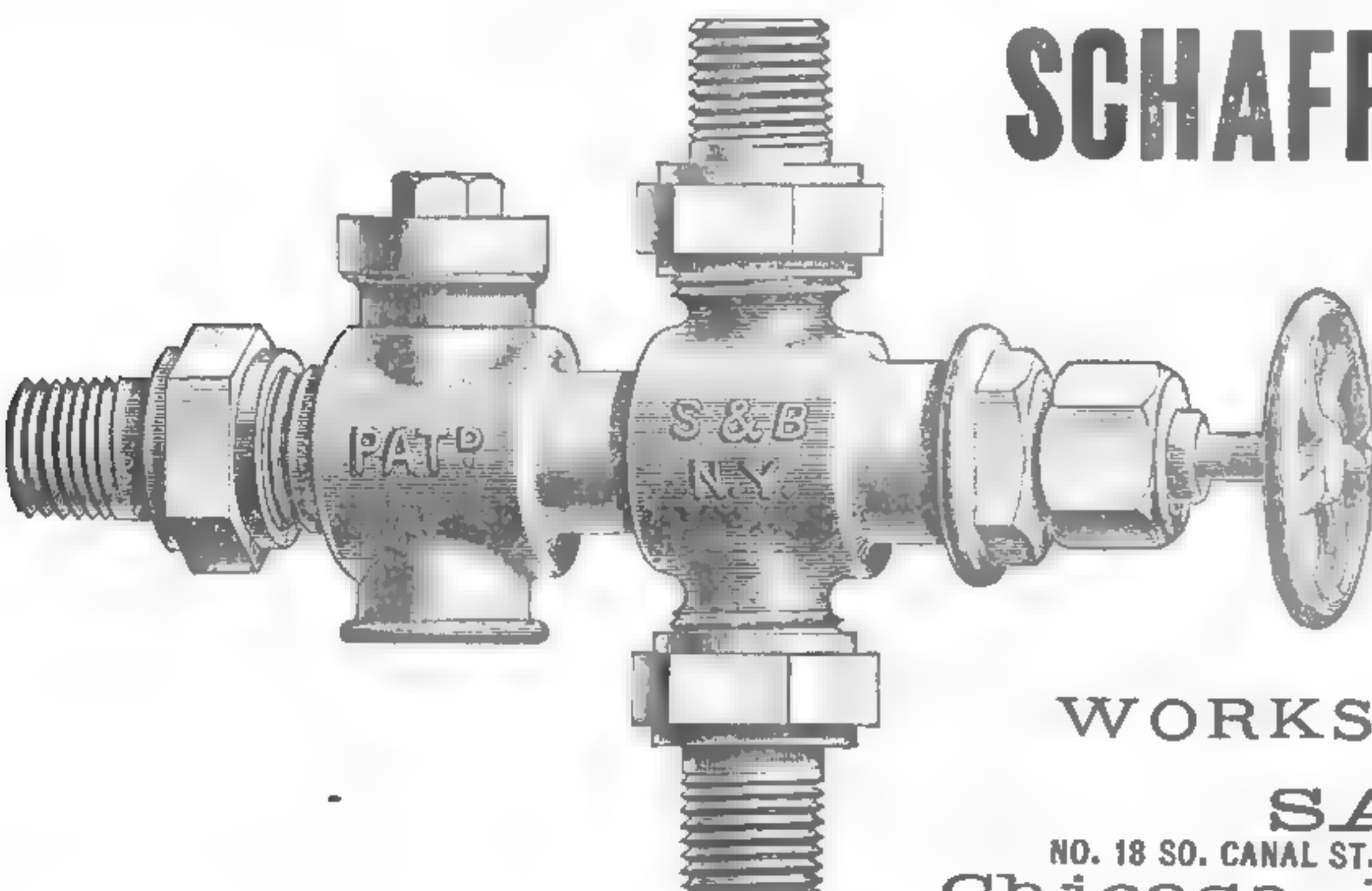
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## NOTES AND NEWS.

Strawn, Tex., men project a roller mill.  
 Apalachicola, Fla., men project a grist-mill.  
 S. Davis, grist-mill, Friendship, N. Y., sold out.  
 W. W. Wofford, Gainesville, Ga., starts a corn-mill.  
 Crist, March & Baker, millers, Pulaski, Ind., dissolved.  
 S. Cline, Crossville, Tenn., wants grist-mill machinery.  
 B. B. Boardman, miller, Clifton Springs, N. Y., assigned.  
 The "Big Four" elevator, Sandusky, O., burned; loss \$40,000.  
 The Atlas Milling Co., Los Angeles, Cal., sold out to C. C. Kohlmeier.  
 P. Dressen's elevator, Bennington, Neb., burned; loss \$6,000; insurance \$2,500.

Rich & Southworth, millers, Tooele, Utah, are succeeded by John Southworth.

Western Kansas and Nebraska have very short crops of cereals and everything else.

Thayer & Gilmore's mill and elevator, Iola, Kan., burned; loss \$10,000; insurance \$4,000.

Mr. Hensley, Baird, Tex., has bought the Day flour-mill and will refit with rolls and operate.

The Illinois corn crop of 1890 is only 160,000,000 bushels, against 248,000,000 bushels in 1889.

Stone Bros., Georgetown, Ky., have put \$4,000 worth of roller machinery in their flouring-mill.

The Staunton Steam Roller Mill Co., Staunton, Va., want machinery for a corn-mill and a grain-elevator.

Henderson & Schofield, millers, Sandy Springs, Md., dissolved, James T. Henderson continuing the business.

Michigan mills are running on half-time in Flint, owing to the inability of the millers to get a supply of wheat.

The Case Mfg. Co., Columbus, O., have an order from D. C. Webb, Parkersburg, W. Va., for 1 automatic feed.

The Michigan State Miller's Association will hold its regular annual convention in Lansing, Thursday, January 8th, 1891.

R. C. Mansfield, Cat Creek, Ky., has placed his order with the Case Mfg. Co., Columbus, O. for rolls, purifiers, bran-dusters and other machinery.

The Canadian Pacific and Northern Pacific Railway Companies have reduced the all rail rates on grain, flour and mill-stuffs from Winnipeg, Manitoba, Canada, and points west to Toronto  $2\frac{1}{2}$  cents, making the through rates  $44\frac{1}{2}$  cents instead of 47 cents.

The owners of grist-mills in Huntington county, Que., adjoining New York State, complain that Canadian farmers can send their grain into New York to be ground and have the product returned duty free, while a similar privilege is not granted by the United States Government. The millers petition the Minister of Customs to cancel this privilege enjoyed by Canadian farmers.

Michigan monthly crop report for December: Correspondents report wheat in condition far above the average. In the southern counties it is 103 per cent., 99 in the central and 102 in the northern. This is 26 per cent. better than one year ago in the southern and 15 in the central district. Nearly all correspondents report the Hessian-fly present, but no appreciable damage has resulted from its ravages.

The crop bulletin issued by the Ontario Department of Agriculture, says: "The fall wheat yield is below the average, but the quality is good. Spring wheat is comparatively a failure, there being a light return, much below standard weight. Correspondents are divided on the question of two-rowed barley now being tested for the English market. While a few glowing accounts are given as to yield and quality, by far the greatest

number of returns class it as no better than the six-rowed variety, and it has the disadvantage of taking a week or ten days longer to mature. Oats proved to be a great disappointment, as the yield is below the average, and there is considerable discoloration. The yield of peas is above the average, but bugs and rain have impaired the quality."

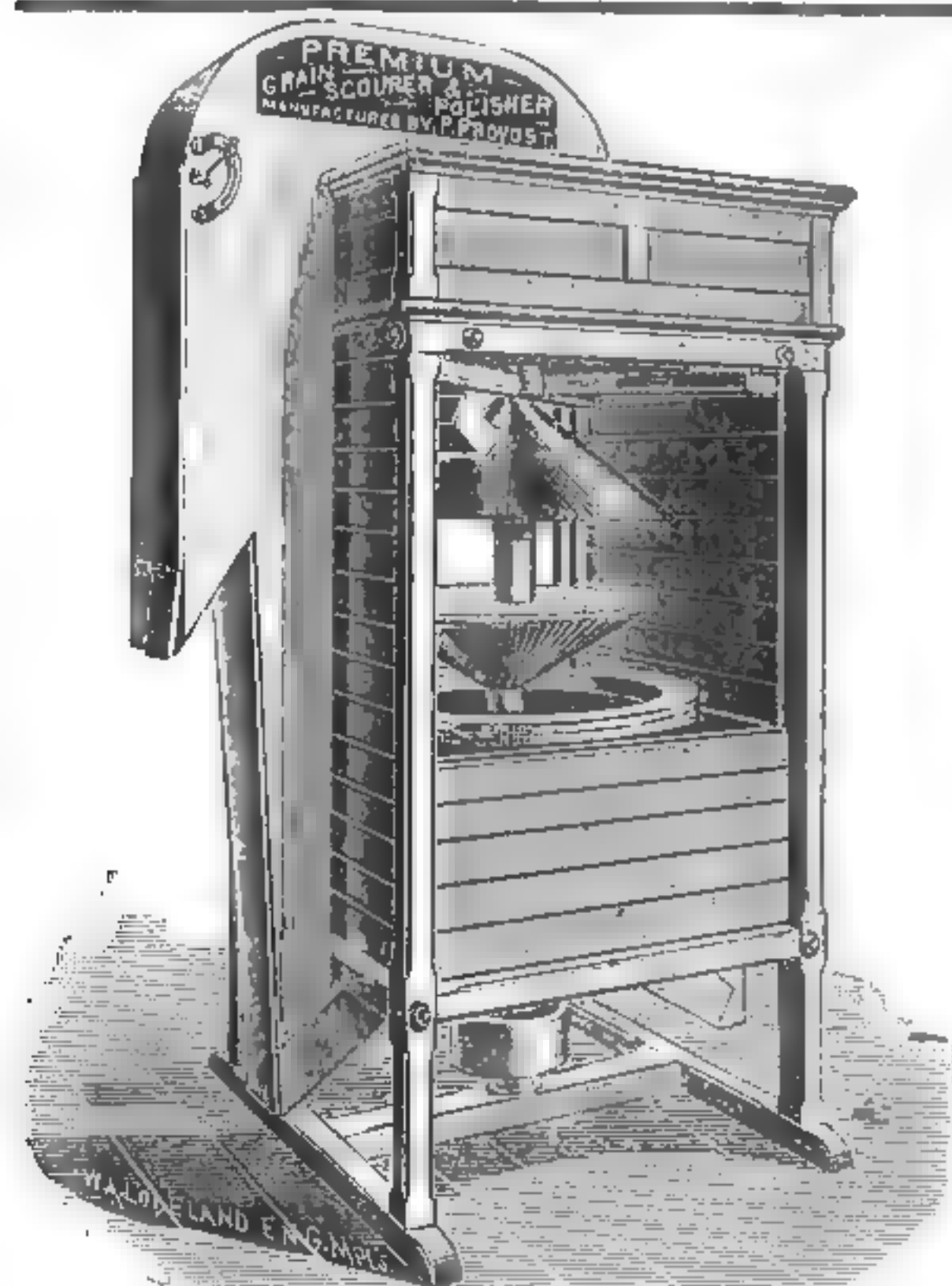
Says the Winnipeg, Manitoba, "Commercial": It is well that financial matters are getting rapidly down to a safer though a depressed state, that in sympathy with them grain markets are recovering somewhat, otherwise it would soon be impossible to find men possessed of the necessary imperturbability to stand the abuse a Northwestern grain-buyer would have to stand. This year is one which tries the best posted men in buying, so varied are the samples of wheat which come under his hand. A remark was recently made among local grain men that this year a successful buyer would require to possess all the judgment of Solomon, the meekness of Moses, the patience of Job and the eyes of Argus. Possessed of all these he might under ordinary circumstances get along smoothly with his farmer customers and their friends, or rather pretended friends, but, with a few market breaks like the one recently passed through, all these qualifications would utterly fail to keep him out of a continual state of wrangle and torment.

The Hessian fly appears to have a cinch on the winter-wheat crop of 1891. Secretary Mohler of the Kansas State Board of Agriculture has received reports that the Hessian fly is doing considerable damage to wheat. The fly seems to have appeared in all sections of the State, and is especially bad in the wheat sown early. If warm weather continues, the damage will be serious, but a cold snap will save the crop. D. H. Harts writes from London, Ill., to a prominent commission house in Chicago, as follows: "We have known for several weeks that the fly was greatly injuring the wheat here, but only since the cold weather set in has it become more discernable. Mr. Keohule, William Scully's agent here, who controls 50,000 acres in this country, said to me that one-half of the wheat on their lands was already ruined. William A. Layman says 25 per cent. is ruined and 50 per cent. of balance is badly hurt and gets worse daily. E. W. Bates, who farms 2,000 acres, says much of the wheat is already dead. R. N. Forsyth says wheat sown in corn Oct. 2 is rotten with the fly. Think the wheat we have out, 200 acres, will require resowing to spring wheat or oats." A person traveling through the wheat belt of Illinois says: "It is very dry all down through this country, and wheat is drying up and getting brown. The Hessian fly is doing great damage."

### BOOKS AND PAMPHLETS.

The Christmas number of *Good Housekeeping*, which bears date of December 6, will be welcomed by those who have not yet completed their arrangements for the holidays, as it is filled with matters pertaining to the subject, and nothing in this well-known home journal is ever dull or perfunctory. It is to be a monthly henceforth, though it will give an equal or greater amount of reading matter during the year, and the price is to be made 20 cents per number, whether for single issue or for the year. Several new features are announced for 1891, including the most approved Redfern Fashions, and special articles from Miss Parloa. Clark W. Bryan & Co., Springfield, Mass., publishers.

"THE TALLEYRAND MEMOIRS" IN THE CENTURY.—*The Century* magazine is running a fast press day and night in order to print the first installment of the delayed "Talleyrand Memoirs" in the January number. This first article will be preceded by a brilliant pen-portrait of Talleyrand, by Minister Whitelaw Reid, who has made the selections from the most interesting chapters of the first volume. The first installment of selections from "The Memoirs of Talleyrand," which appears in the January *Century*, contains a sketch of the author's strange and lonely childhood, an account of his entry into Parisian society, his estimate of La Fayette, some account of the beginnings of the French Revolution, a striking passage concerning the Duke of Orleans, an account of Talleyrand's residence in England and America, and of a most interesting conversation between Talleyrand and Hamilton on the subject of free trade and protection.



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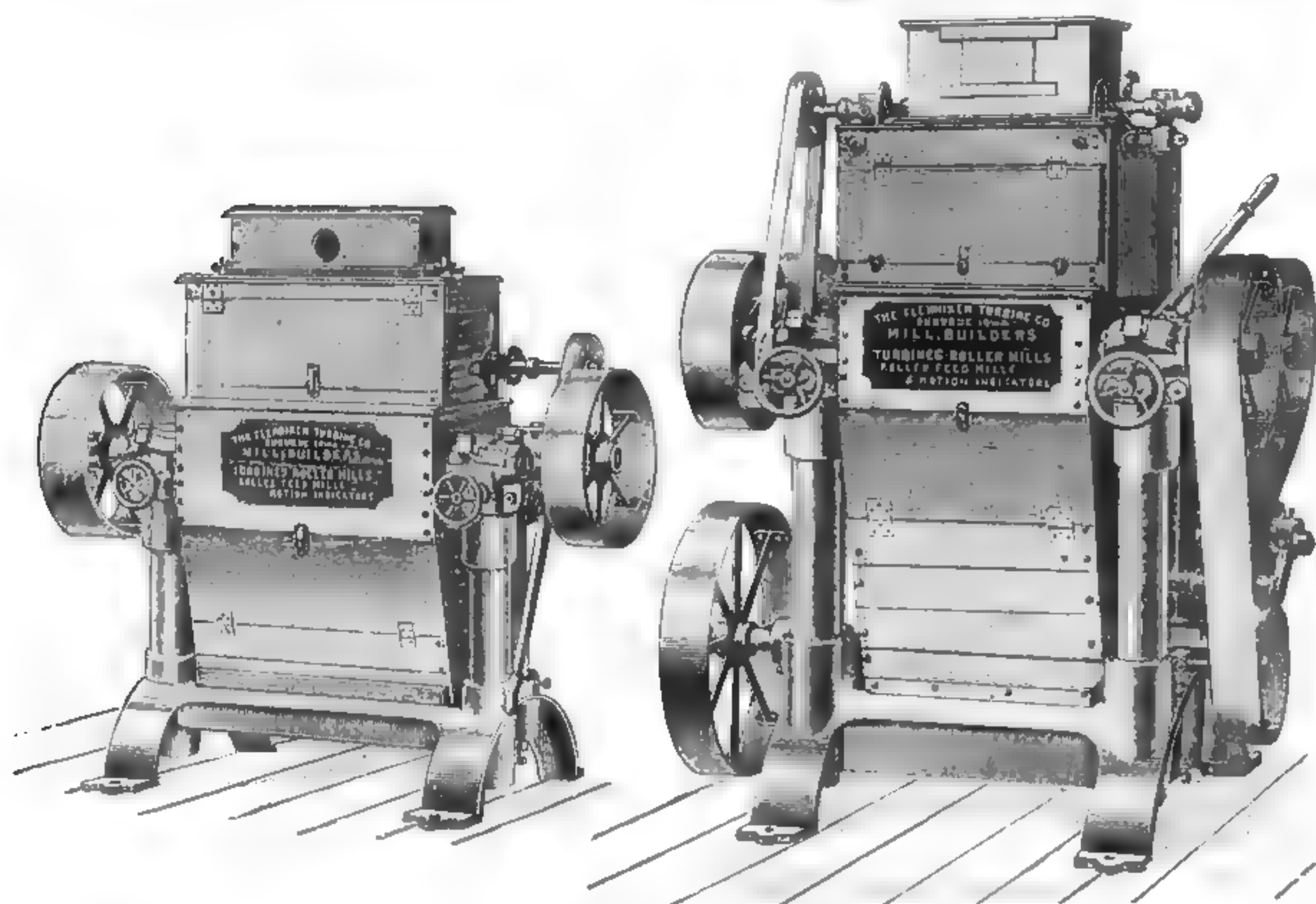


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*Ye jolly millers, one and all,  
Who granulate with burrs,*

A Moses has Come to Deliver You from Egypt. Cease Trying to Make Bricks without Straw. The Red Sea of Expense Has Been Divided.

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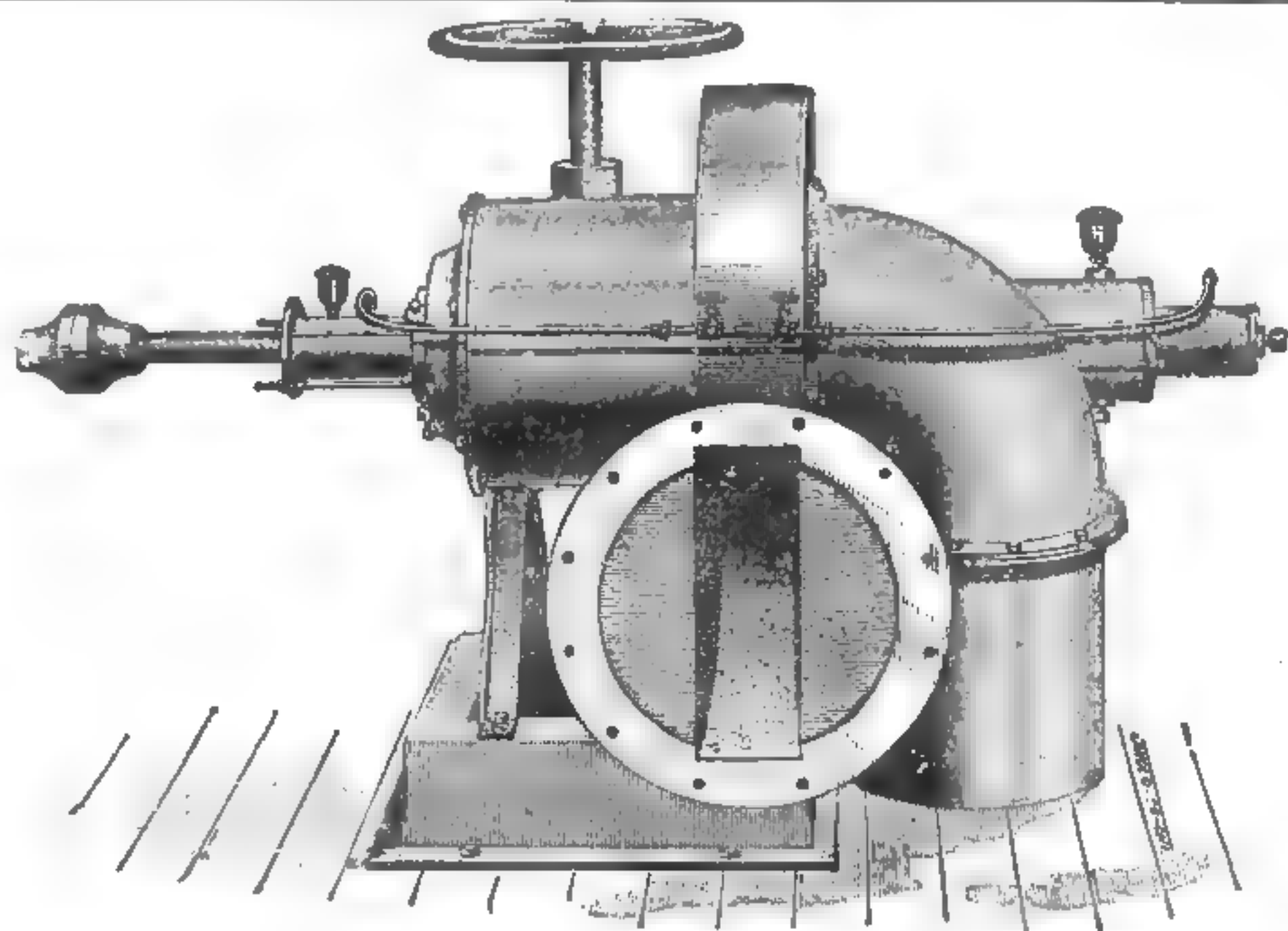
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With or Without Iron Flumes,

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DUBUQUE, - IOWA.





## EUROPEAN ECHOES.

THE stocks of wheat in bond in the ports of France on November 1 were officially reported at 3,700,000 bushels, against 5,680,000 bushels on November 1 last year.

GERMAN reports say that farmers are not satisfied with the present condition of autumn sowings, the cold and wet weather not having allowed the plants to develop as much as usual.

RECENT estimates place the wheat unsold in the United Kingdom, stocks in British ports and wheat and flour on ocean passage at 91,000,000 bushels, against 79,000,000 bushels a year ago.

AUSTRIA-HUNGARY is sending only a small quantity of wheat to Great Britain, notwithstanding the high prices ruling. It is now thought that the Hungarian wheat crop was grossly overestimated.

THE flour-milling industry of Russia is said to be suffering from the repressive measures against the Jews adopted by the government. Many of the mills belong to Jews, who have been forced out of business.

ONE Liverpool journal claims to have conclusive proof that the so-called "official" exports from Russia are "padded." It claims that, instead of exports of 1,100,000 quarters for the three weeks previous to November 18th, as semi-officially reported by the Russian authorities, the total was only 700,000 to 730,000 quarters, and 359,000 quarters were for the United Kingdom.

A RUSSIAN chemical expert recently took to Paris a number of selected samples of Russian flour, with the object of initiating a large export trade in this product with France. The analysis made in the Municipal Laboratory gave the most satisfactory results, and the bread baked from the Russian flour was acknowledged to be much superior to French bread. It has therefore been resolved to establish at once several large bakeries in Paris.

ENGLISH opinion of Southern Hemisphere crop reports is beginning to be skeptical. Beerbohm says: Concerning the Argentine crop, it would be unwise to accept as at all final the estimate given in a letter from Buenos Ayres (dated October 15), which records the area sown in the Province of Santa Fe 50 per cent. larger than last year, and estimates the possible export surplus in that Province at 400,000 tons, or 1,600,000 quarters. Previous experience has taught the trade that early estimates concerning the Australasian and Argentine crops are apt to be very much astray.

### COTEMPORARY COMMENT.

While the Northwest is usually on the long side of wheat, being a large owner by necessity, there are individuals who take glimpses of the reasons back of the other side of the market. They dismiss the idea that "it makes no difference with us what Europe will pay for wheat, for we will have none to sell them" as a notion that is exploded by events already transpired. With the supply on passage larger than last year and the stocks of wheat increasing in the United Kingdom, it is shown that some are selling wheat liberally, and that our own market is depressed by it.—*Minneapolis "Market Record."*

A few of the dusty coated boys got caught in the late panicky unpleasantness when wheat went flickering up and down so fast they couldn't cover their tracks fast enough. They are much wiser now than they were a month ago and just as handsome, but they will have to be more economical for three months to come to even up with the deal. Hands off, boys! Don't monkey with the band-wagon unless your balance is so big you won't miss the drop.—*St. Louis "Miller."*

In less than a month three western mutual companies have been put in the hands of receivers. Altogether, nearly a dozen of these companies have suspended operations in

the last six months. Doubtless this has a meaning. All of these failures occurred before the recent flurry in the money market took place. The cause of the failures must be sought elsewhere than in a strained condition of the mercantile world. The fact is that these failures were caused by a want of care in the selection of risks. The smaller the company is, the more conservative it should be in the conduct of its business. Other mutual companies still continue to do business at a cost of about 50 per cent., to the insured, of stock company rates; but they adhere to their old policy of thorough inspection and careful selection.—*Chicago American "Miller."*

The German government is very seriously considering the question of encouraging the importation of corn from America. It now buys largely from Russia, but in case of a war with that power their supply would be cut off, hence the Government has deemed it best to cultivate the trade with America.—*Chicago "Daily Business."*

### DUBIOUS AND DELIRIOUS!

#### THE OLD GRIST MILL.

"Dusty" in "American Miller."

The old grist-mill at the foot of the hill  
Has many charms for me;  
With its moss-covered roof it stands aloof,  
As any old mill can be.  
As the wheel goes round, the familiar sound  
Brings back my boyhood days,  
When life was bright and heart was light,  
And careless of blame or praise.

In years gone by no famine's cry  
Was heard from any land;  
But with good cheer, though far or near,  
Thou lent\* a helping hand.  
Thy products send with good interest†  
To Ireland's famished shore,  
Where blessed indeed with many a seed  
That grew and nourished more.

From dawn of day, without delay,  
Thy zeal surpassed by none,  
Far into night, by candle light,  
Thy work went bravely on.  
For poverty's wail or sorrow's tale  
Thy wheels went round and round.  
The widow's prayer or orphan's tear  
Lent music to the sound.

When in thy prime no thought of time,  
No fear of growing old,  
E'er slack'd thy will or kept thee still  
In summer's heat or winter's cold.  
Now timbers worn, machinery torn,  
And sadly out of gear,  
Show well thy labor, for friend and neighbor  
Now grow less from year to year.

Grind on, old mill at the foot of the hill,  
Thy fame is nobly won.  
Though wheels grind slowly, whether high or lowly,  
Thy work is nobly done.  
Some may applaud and greatly laud  
The merits they set forth,  
But time tries all, though great or small,  
And proves their real worth.

The busy life with toil and strife  
Hath hallowed all thy days.  
Old friends have gone, and none but one‡  
Remains to sing thy praise.  
Long may thy name retain its fame,  
Long may thy work go on,  
Till nature's hands shall loose its bands—  
Thy work will then be done.

\* "Thou lent" is extremely good. It may be called the "red-dog" of English grammar reduced on a red-hot roll.

† "Interest" makes a delightful rhyme with "send." We have seen "Mozambique" rhymed with "Popocatepetl," hence we do not flinch at this rhyme.

‡ "None but one" is very able and very poetical. Literally, it means "not one but one," a sort of double-back-action negativized tautology allowable only in rhyme.

### CATARRH.

#### CATARRHAL DEAFNESS—HAY FEVER.

##### A NEW HOME TREATMENT.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King street, Toronto, Canada.—*Christian Advocate*

Sufferers from Catarrhal troubles should carefully read the above.



# LITTLE GIANT WATER WHEEL

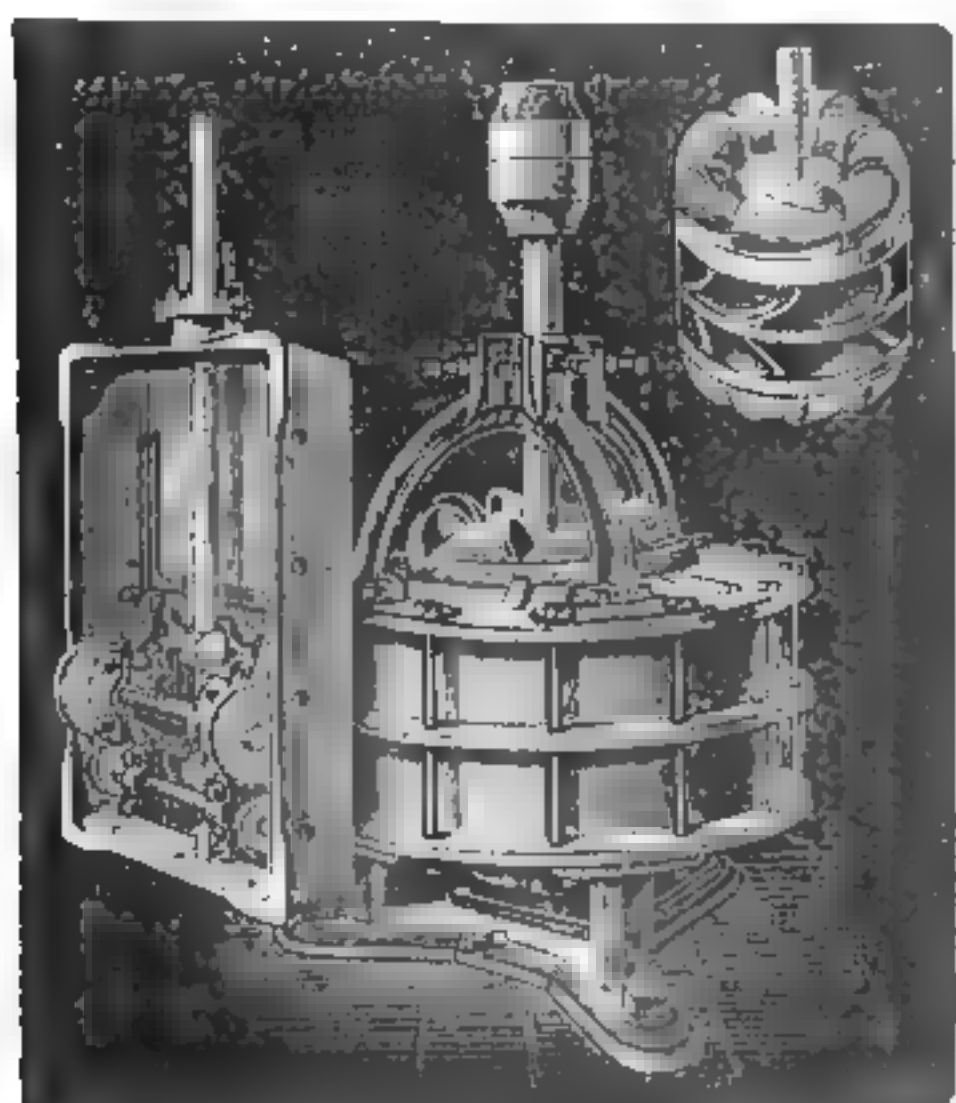
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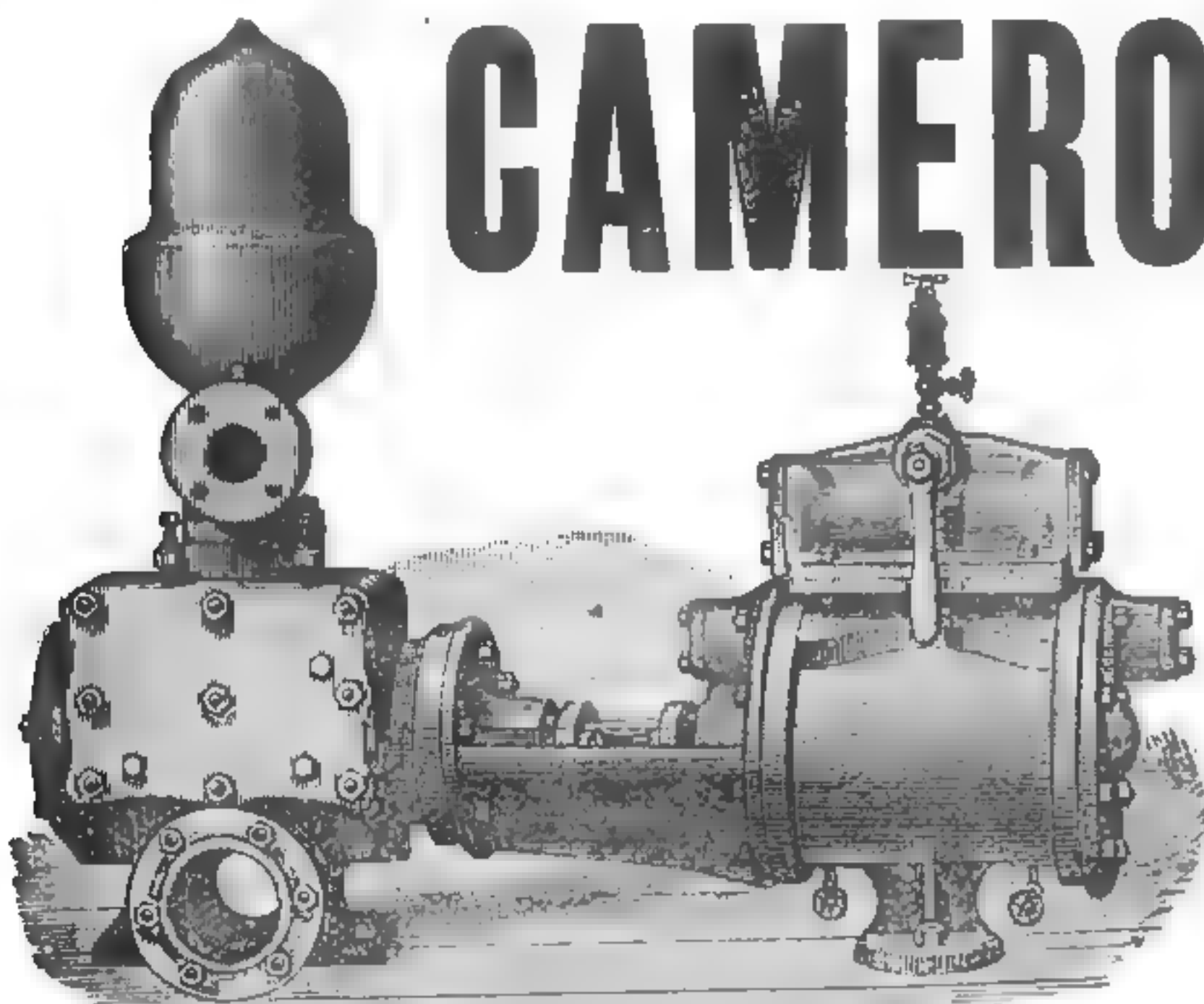
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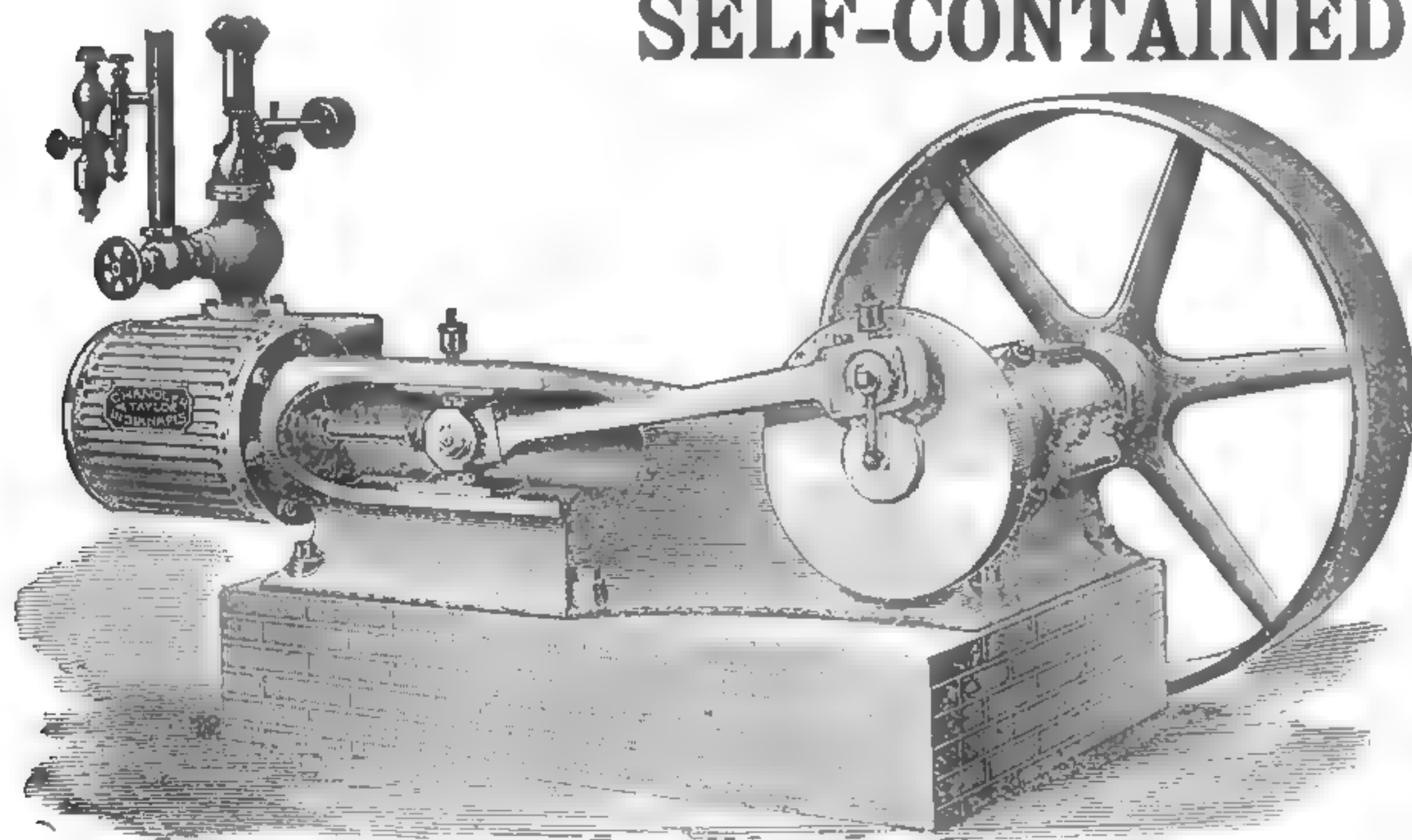
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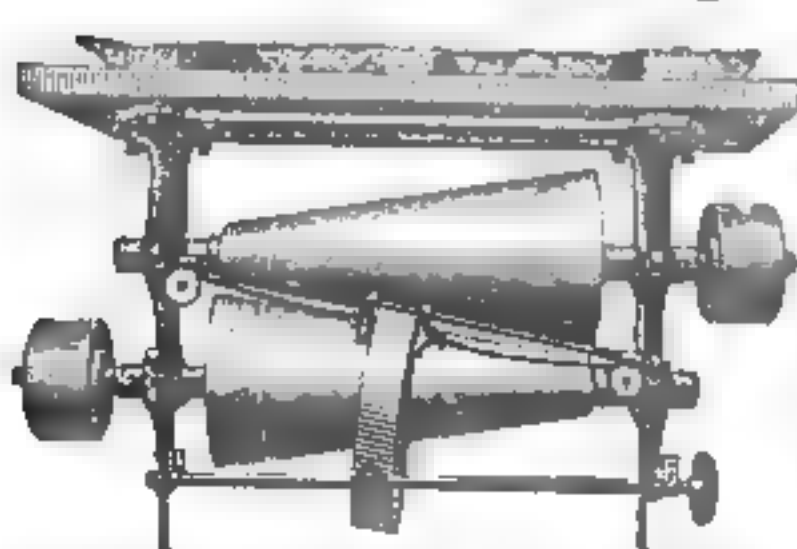
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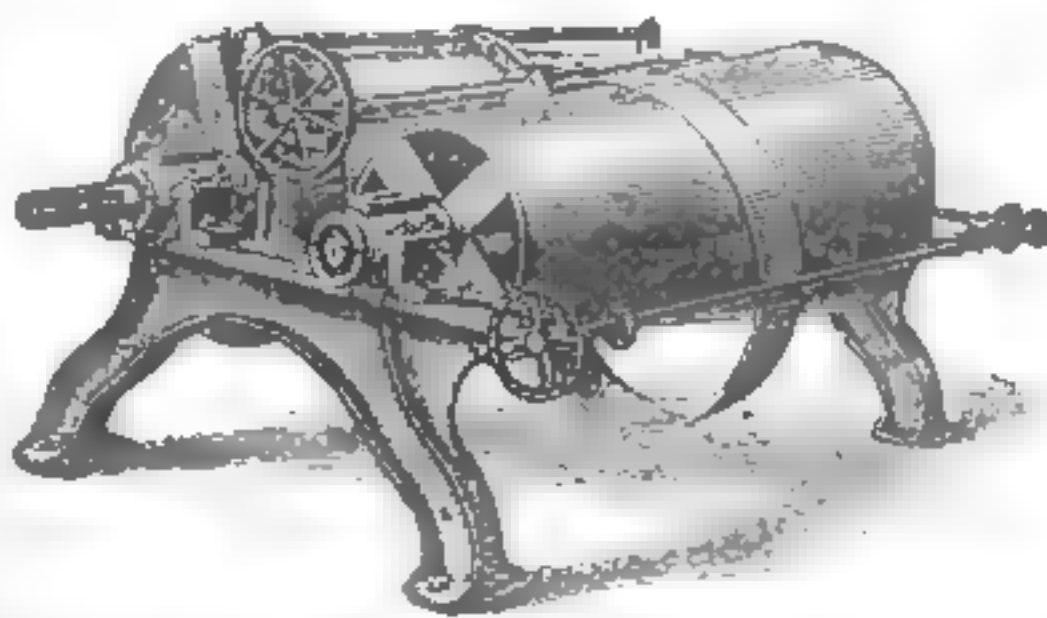


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**SHIPPER**  
CAN SAVE TIME  
AND TROUBLE  
AND CASH

BY USING  
**BARLOW'S**  
PATENT  
MANIFOLD  
**SHIPPING**  
BLANKS. SEND FOR  
SAMPLE SHEET AND PRICES  
BARLOW BROS. GRAND RAPIDS, MICH.





OFFICE OF THE MILLING WORLD,  
BUFFALO, N. Y., Dec. 13, 1890.

Friday of last week was a day of irregular and generally higher markets, on light receipts, covering of shorts and good demand for spot. In New York December wheat closed at \$1.02½, with Atlantic port receipts 33,398, exports 6,452, and options 3,100,000 bushels. December corn closed at 63c., with receipts 27,190, exports 115,611, and options 1,068,000 bushels. December oats closed at 50½c., with receipts 72,435, and exports 9,740 bushels. Wheat flour was not quotably changed. Receipts were 13,587 sacks and 19,871 barrels, and exports 6,908 sacks and 32,198 barrels. The minor lines were unchanged.

Saturday brought unsettled and dull markets, with a tendency to advance restrained by financial troubles and tight money in the West. December wheat closed at \$1.02½, with receipts 39,559, exports 11,223, and options 1,840,000 bushels. December corn closed at 63c., with receipts 52,425, exports 67,891, and options 536,000 bushels. December oats closed at 50½c., with receipts 73,627, exports 9,643, and options 220,000 bushels. Wheat flour was dull, weak and generally lower, on stagnation in New York and increasing stocks everywhere. Receipts were 16,734 sacks and 25,714 barrels, and exports 18,649 sacks and 6,096 barrels. The minor lines were featureless.

Monday brought higher opening markets, on small stocks, and an off closing on financial troubles and failures. The scalpers were at the front in trade, and they have a prospect of work in their line so long as general money matters remain unsettled. December wheat closed at \$1.01½, with receipts 82,022, exports 2,158, and options 2,720,000 bushels. December corn closed at 62½c., with receipts 60,668, exports 11,622, and options 560,000 bushels. December oats closed at 50c., with receipts 87,297, exports 18,155, and options 170,000 bushels. Wheat flour was dull, weak, lower and dragging. Receipts were 22,637 sacks and 32,970 barrels, and exports 7,820 sacks and 8,590 barrels. The minor lines showed no quotable changes. The visible supply in the United States and Canada was:

	1890. Dec. 29.	1889. Dec. 30.	1888. Dec. 8.
Wheat.....	24,569,834	33,340,664	36,569,951
Corn.....	2,278,834	5,729,390	6,576,017
Oats.....	3,309,875	4,869,318	7,592,592
Rye.....	498,854	1,114,932	1,639,638
Barley.....	4,608,193	2,774,181	2,267,905

Tuesday brought dull, stronger and higher markets, with dead spot trade, lighter receipts and lower sterling exchange. December wheat closed at \$1.02½, with receipts 42,713, exports 53,886, and options 872,000 bushels. December corn closed at 63c., with receipts 35,559, and exports 25,779 bushels. December oats closed at 50½c., with receipts 104,860, exports 26,010, and options 240,000 bushels. Wheat flour was unsettled and irregular. Receipts were 16,773 sacks and 43,605 barrels, and exports 33,468 sacks and 30,043 barrels. The minor lines were featureless generally.

The following shows the amount of wheat and flour, together with the amount of corn, on passage to United Kingdom, for ports of call or direct ports for the weeks mentioned:

	1890. Dec. 9.	1890. Dec. 2.	1889. Dec. 10.
Wh. & flour, qrs.	2,324,000	2,273,000	1,996,000
Corn, qrs.....	460,000	436,000	404,000

The following shows the amount of wheat and corn on passage to the Continent for the past week, the previous week, and for the same week last year:

	1890. Dec. 9.	1890. Dec. 2.	1889. Dec. 10.
Wheat, qrs....	665,000	540,000	386,000
Corn, qrs. ....	133,000	114,000	188,000

India wheat to United Kingdom.....	Qrs. 1000,000
India wheat to Continent.....	22,500

The imports into the United Kingdom for the past week and the previous week and for same week last year:

	1890. Dec. 9.	1890. Dec. 2.	1889. Dec. 10.
Wheat, qrs.....	273,000	268,000	291,000
Corn, qrs.....	107,000	54,000	94,000
Flour bbls.....	132,000	156,000	169,000

Wednesday was another day of dull and stronger markets, on better financial outlook, but spot and future trade was nearly dead. December wheat closed at \$1.03½, January at \$1.03½, February at \$1.05, and March at \$1.05½. Receipts were 77,169, exports 137,885, and options 1,368,000 bushels. December corn closed at 63½c., January at 62¼c., and May at 61½c., with receipts 43,939, exports 15,459, and options 640,000 bushels. December oats closed at 50½c., January at 50½c., and May at 51½c., with receipts 82,623, exports 11,856, and options 50,000 bushels. Buckwheat grain was dull at 58c. Rye grain was less freely offered and more firmly held for all but State, which was unchanged. Quotations: State, 79@80c.; Western, 76@78c.; Canada, 73@75c.; car lots 2@3c. less on the track. Barley was unchanged and unsalable without concessions; but as there are few or no buyers in the market, holders do not lower their asking prices, which were quoted: Two-rowed State 85c.; No. 2 Milwaukee, 82@83c.; Western, 77@90c.; No. 2 Canada, 89@90c.; extra No. 2 do. 93@95c.; No. 1 do. and six-rowed State nominal. Malt was nominal at old prices asked and unsalable except at concessions. Quotations: New Western, 93@98c.; new country Canada, \$1.03@1.13; new city do. \$1.08@1.18, cash and time. Old—73@80½c. for two-rowed, 78@83c. for six-rowed, 83½@90 for country-made Canada and 90½@98c. for city do. Mill feed was in good demand and steady, with more mills sold up. Quotations: 40 and 80 lbs., \$1.00@1.05; 60 lbs. \$1.05; 100 lbs. \$1.20 and rye \$1.05.

Wheat flour was steadier on easier money, and pressure for cash sales was relieved. Receipts were 24,070 sacks and 20,314 barrels, and exports 7,937 sacks and 23,593 barrels. Sales were made at the following quotations: City mills jobbing at \$5.25; good to choice straights \$4.75; spring patents, good brands, \$5.15; choice bakers' spring \$4.35@4.50; spring fair, in sacks, \$2.75; good unbranded patent springs \$5.00 while \$5.40 could be obtained in 500 and 1,000 barrel lots for the very fancy Minneapolis brands, which were held at \$5.50 in lines and \$5.60 in car lots; fair winter in wood at \$3.40 for choice, city do. reported at \$3.25; very fancy winter patent \$5.35; sacks of spring \$4.30@4.75. Export and local trade at rather easier prices, chiefly to arrive; winter straights by one house, \$4.75@4.90; city mills in lots at \$5.25; patent do. \$5.50@5.00; fine city \$3.25. There were no round lots reported of patents, as buyers and sellers were apart on more than car lots. Sacks patent springs c. i. f. London, 29s 0d. There were through engagements of 12,000 sacks railroad flour to Liverpool at 9s. and London 11s 3d@12s 6d.

Rye flour was firm, on smaller stocks at \$4.10@4.40. Buckwheat flour was dull at \$2.10@2.25 for the range. Corn products were dull and irregular as follows: Brandywine in barrels at \$3.25; Southern in bags at \$1.10@1.65; coarse city \$1.25; fine yellow \$1.32@1.35; fine white \$1.40; Southern \$1.10@1.65 for coarse to granulated.

Thursday brought generally dull and easier markets. December wheat closed at \$1.03½, with receipts 54,433, exports 65,885, and options 1,072,000 bushels. The slight "upishness" in wheat was due to shorts covering. Reports of damage to the winter wheat by the Hessian fly were general and persistent. Export signs were more favorable. December corn closed at 64½c., on larger receipts and offerings, with receipts 54,681, exports 75,022, and options 680,000 bushels. December oats closed at 50c., with liberal offerings, receipts 64,000, exports 7,457, and options 70,000 bushels. Wheat flour was in rather better trade demand, chiefly for winter straights, spring patents and bakers' springs, both in barrels for the trade and in sacks for export for the latter. But there was no improvement in late asking prices, though there was less pressure to sell at or under regular market as was the case early in week. Receipts included 18,516 sacks and 23,697 barrels, and exports 31,054 sacks and 18,876 barrels. The Minneapolis output last week was 114,600 barrels. New York dealers advised western millers to withhold shipments until money is easier. The minor lines were featureless.

Friday brought firmer and higher markets in some lines. December wheat closed at \$1.04½, with receipts 32,400, exports 124,081, and op-

tions 1,376,000 bushels. December corn closed at 63½c., with receipts 1,950, exports 92,738, and options 313,000 bushels. December oats closed at 49½c., with receipts 38,000, spot sales 139,000, and options 145,000 bushels. Wheat flour was firm, higher and in better demand. Receipts were 16,428 and sales 22,356 packages. Quotations were: Low extras \$3.40@3.90; city mills \$5.10@5.35; city mill patents \$5.10@5.35 winter wheat low grades \$3.40@3.90; fair to fancy \$3.90@5.00; patents, \$4.40@5.40; Minnesota clear \$4.10@4.85; straight \$4.35@5.10; Minnesota straight patents \$4.65@5.50; rye mixtures \$4.00@4.50; superfine \$3.00@3.75. The minor lines were featureless.

## BUFFALO MARKETS.

BUFFALO, N. Y., December 13, 1890.

Market fluctuations the past week have kept down business here, especially in wheat. Prices rule as follows: WHEAT—Not much trading was done here. The only sales reported were 10,000 bushels No. 2 northern at 97c.; one car of extra No. 3 red at 98c.; a car of No. 1 white at \$1.08 and a car of No. 1 Oregon white at 85c. CORN—Considerable trading was done in car lots, No. 2 yellow closing at 60c. in store; No. 3 yellow at 57c.; No. 2 corn at 59c. in stores, and No. 3 corn at 56½c. on track. No. 5 yellow sold at 56, 56½, 56½ and 57, according to color. No. 3 corn also sold at 56½ as to quality. OATS—The market closed steady 51c. for No. 1 white in store, and 50½ on track, 49c. for No. 3 white, and 48c. for No. 2 mixed. Sales at these prices were reported. BARLEY—Choice Michigan sells at 78@80c., fair to good at 75@78c. No. 2 Western at 75@77c. and No. 3 do at 70@74c. No. Canada barley is offered to a quotable extent RYE—No. 2, is quotable at 75c. OATMEAL—Akron, \$7.20; Western, \$8.95 per bbl; rolled oats, in cases, 72 lbs., \$3.85. CORNMEAL—Coarse, \$1.15@1.20; fine, \$1.20@1.25; granulated \$1.75 per cwt. MILL-FEED—City-ground coarse winter, \$19.00@20.00 per ton; fine do, \$19.50; finished winter middlings \$22.00@23.00; coarse spring do, \$22.00.

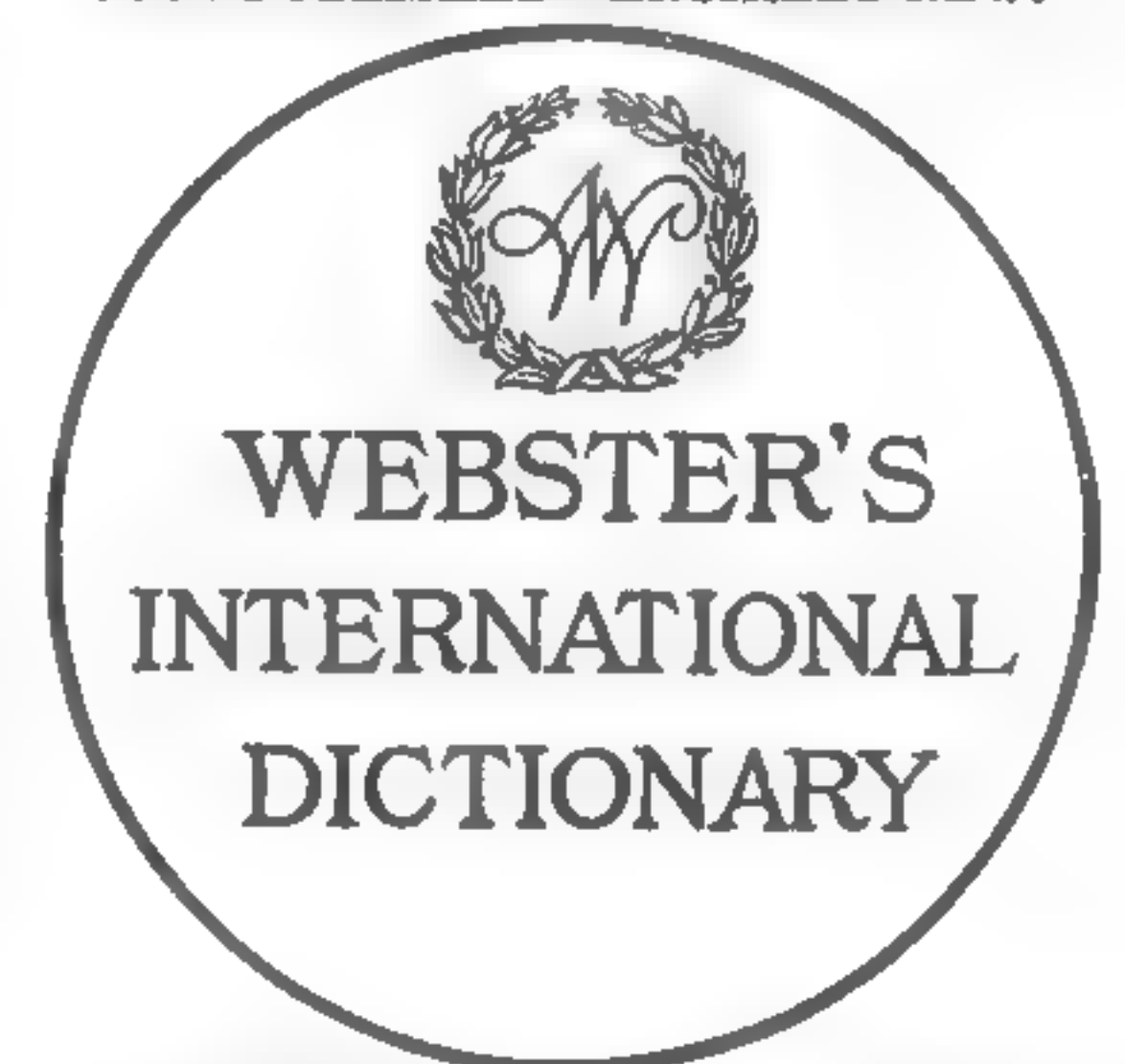
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Bakers' cl'r... .. @5.25	Amber... .. 5.00@5.25
B Rye mixt. .... @4.75	Crck'r flour... 5.00@5.25
Low Grades... .. @3.50	Low grades... .. 3.50@3.75
Rye flour .... 3.75@4.00	Graham..... 4.75@5.00
Buckwheat flour, \$2.75 per 100 pounds.	
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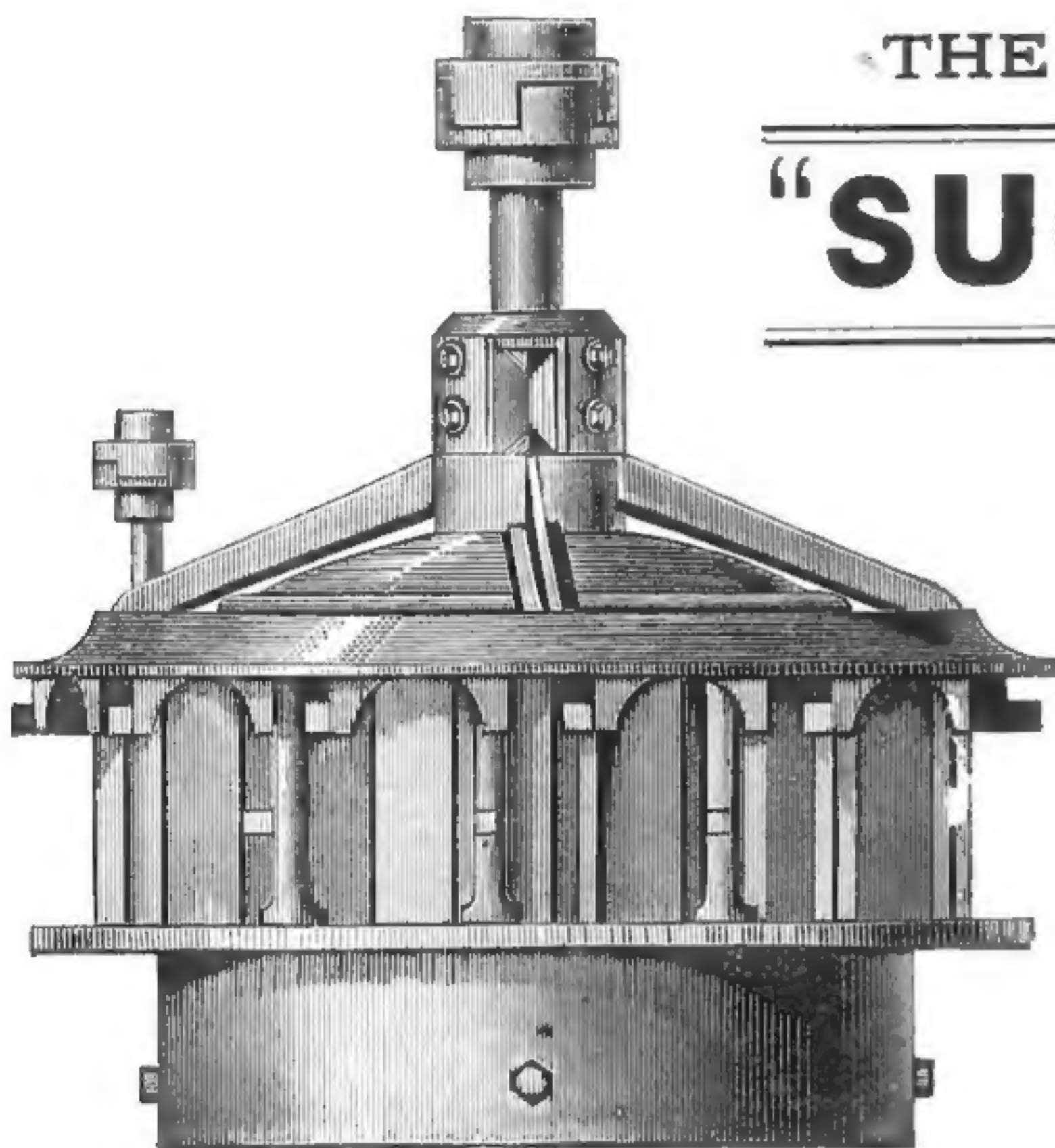
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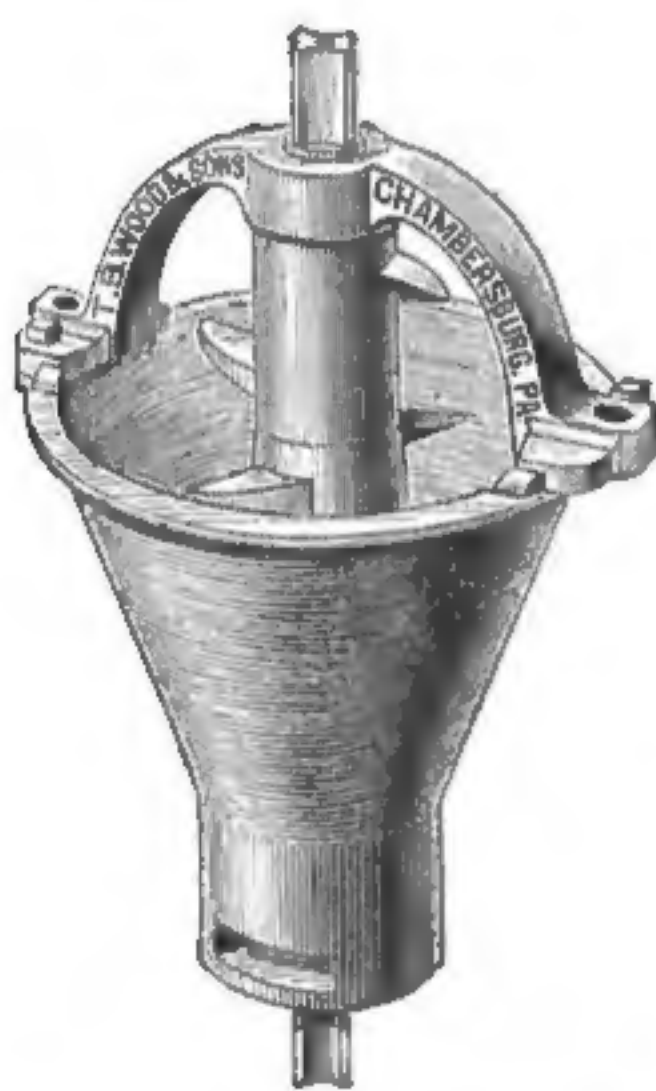
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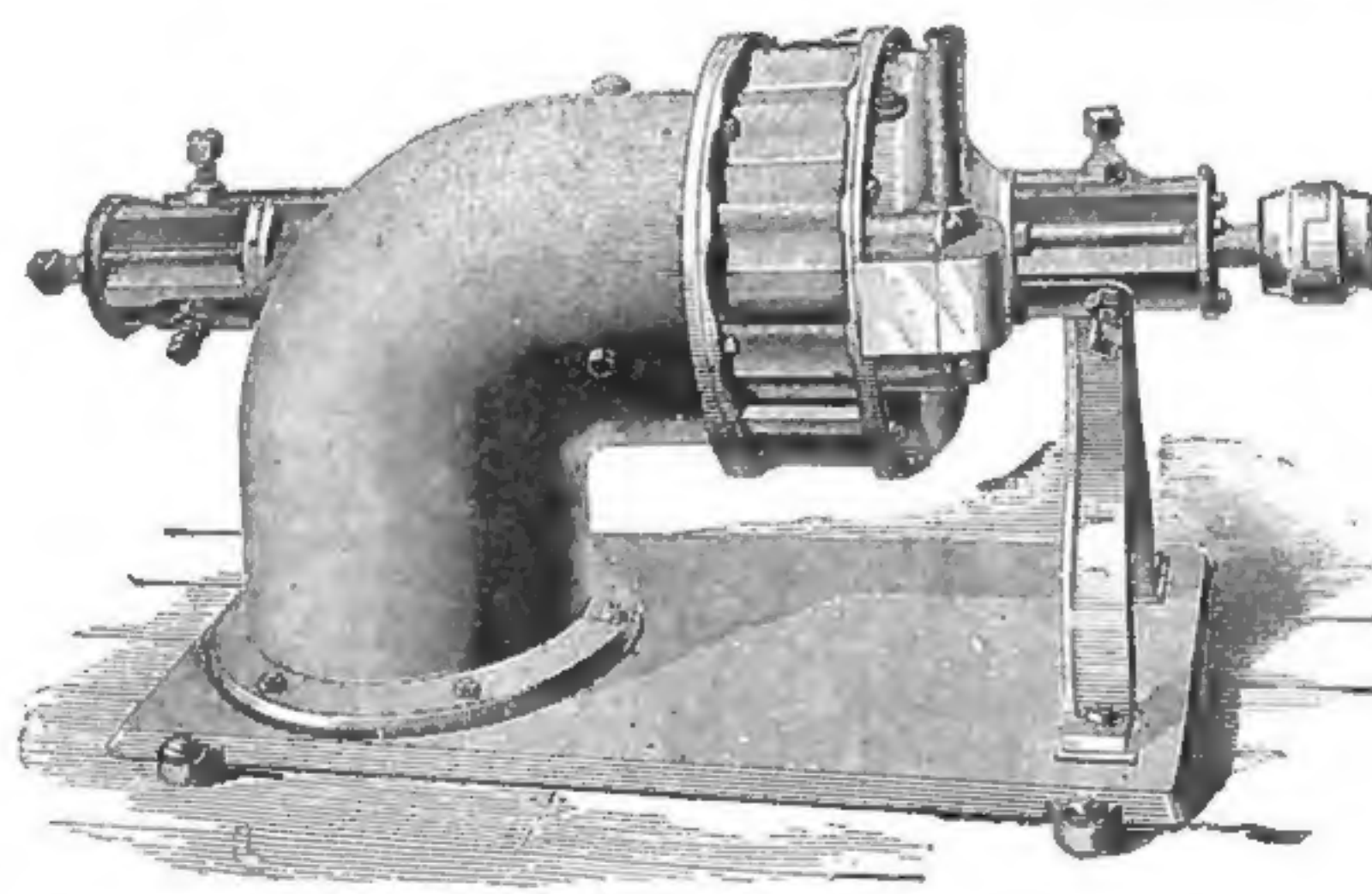
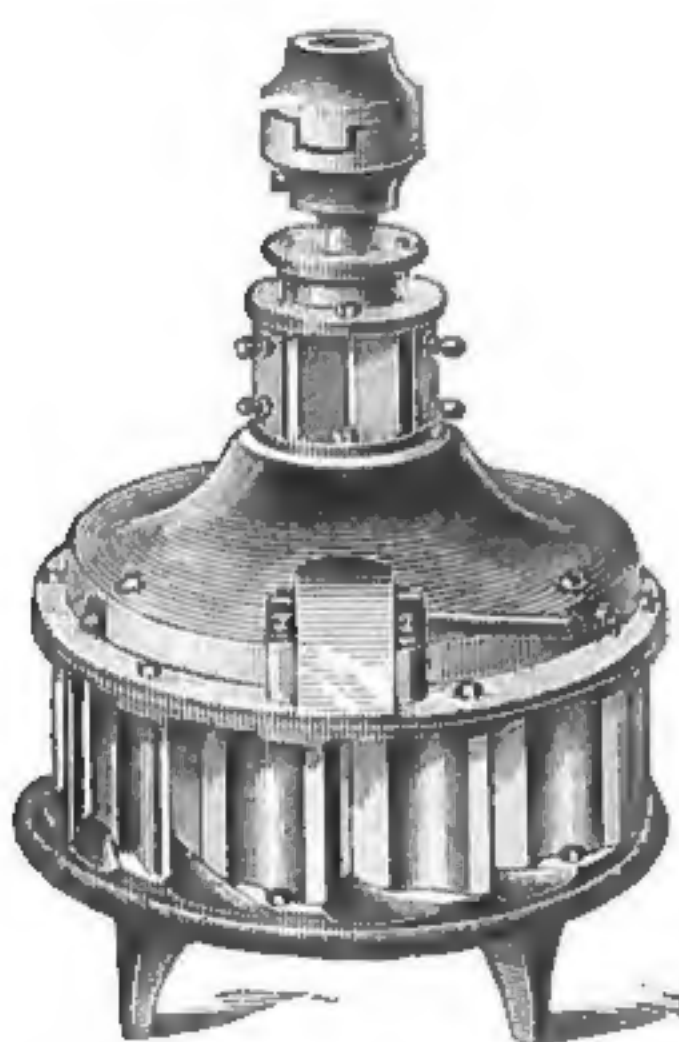


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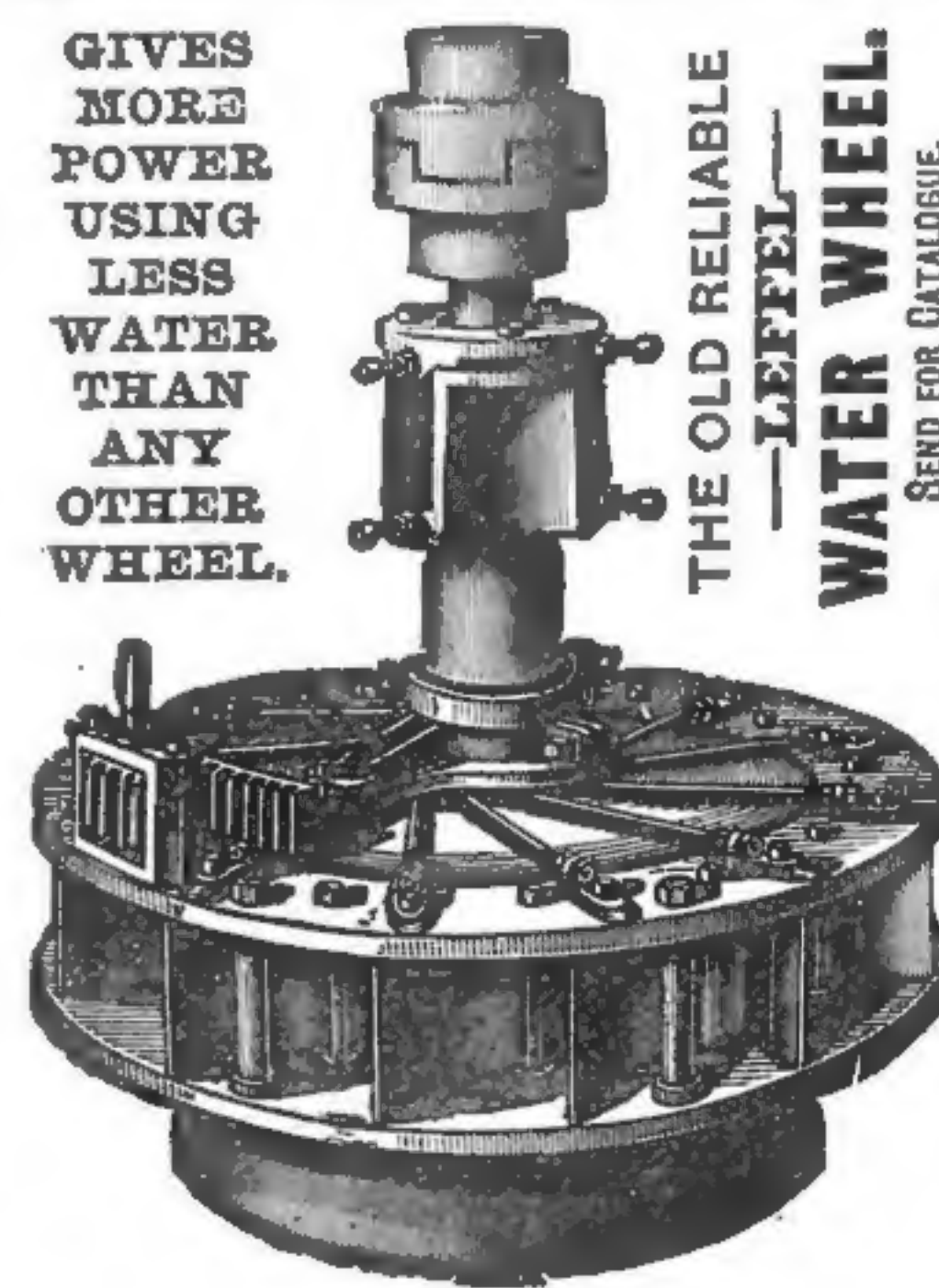
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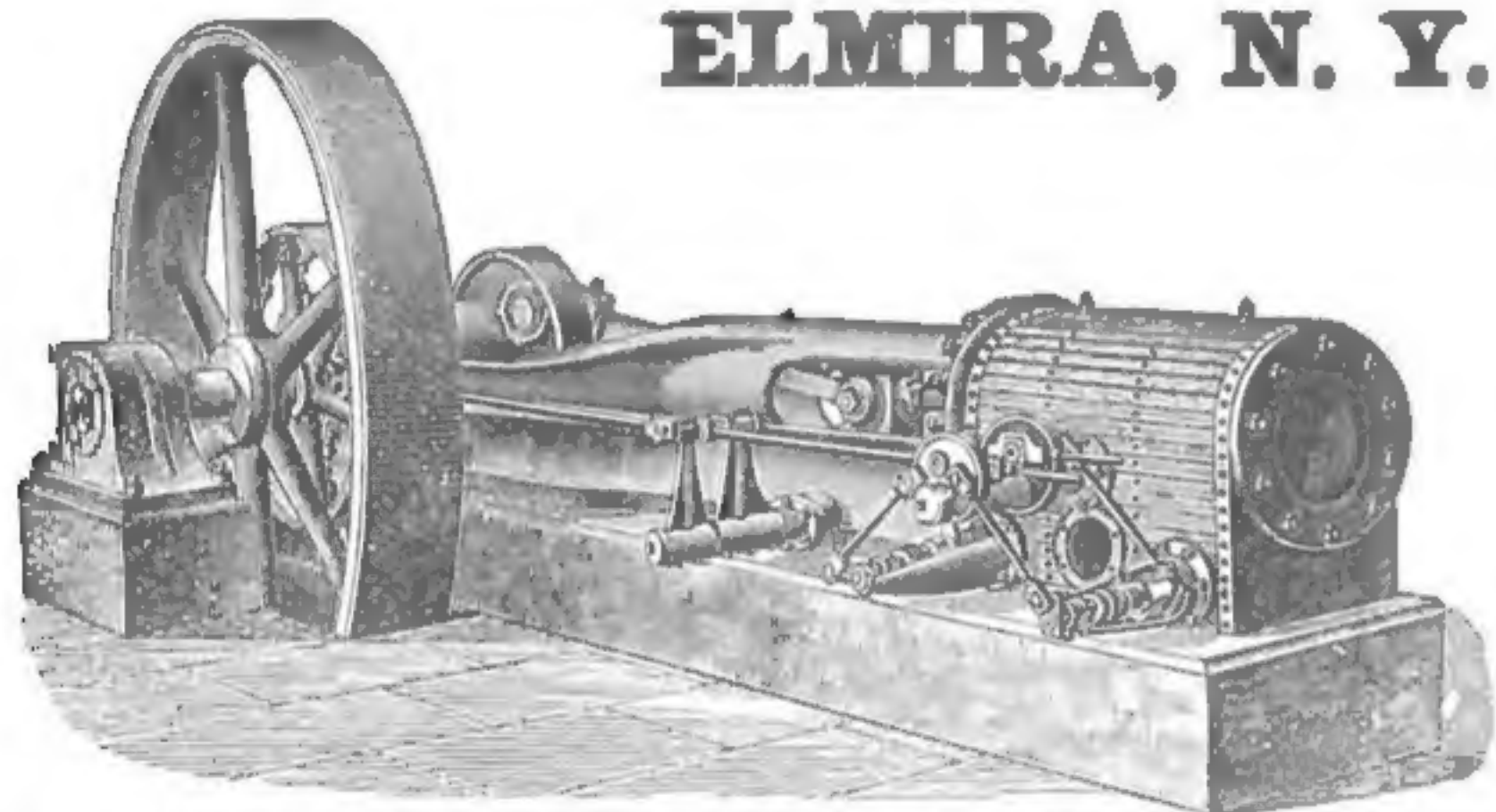
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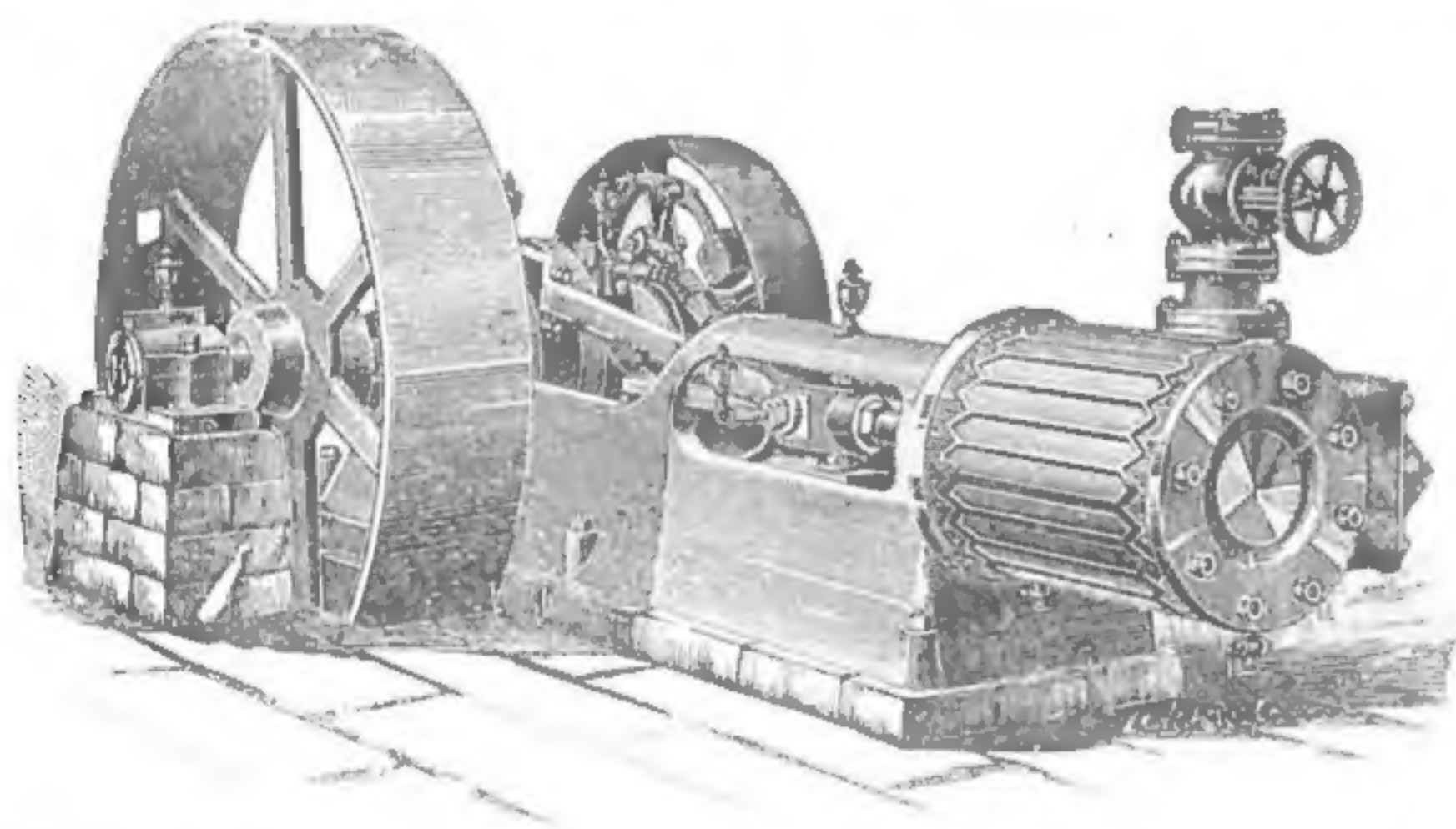


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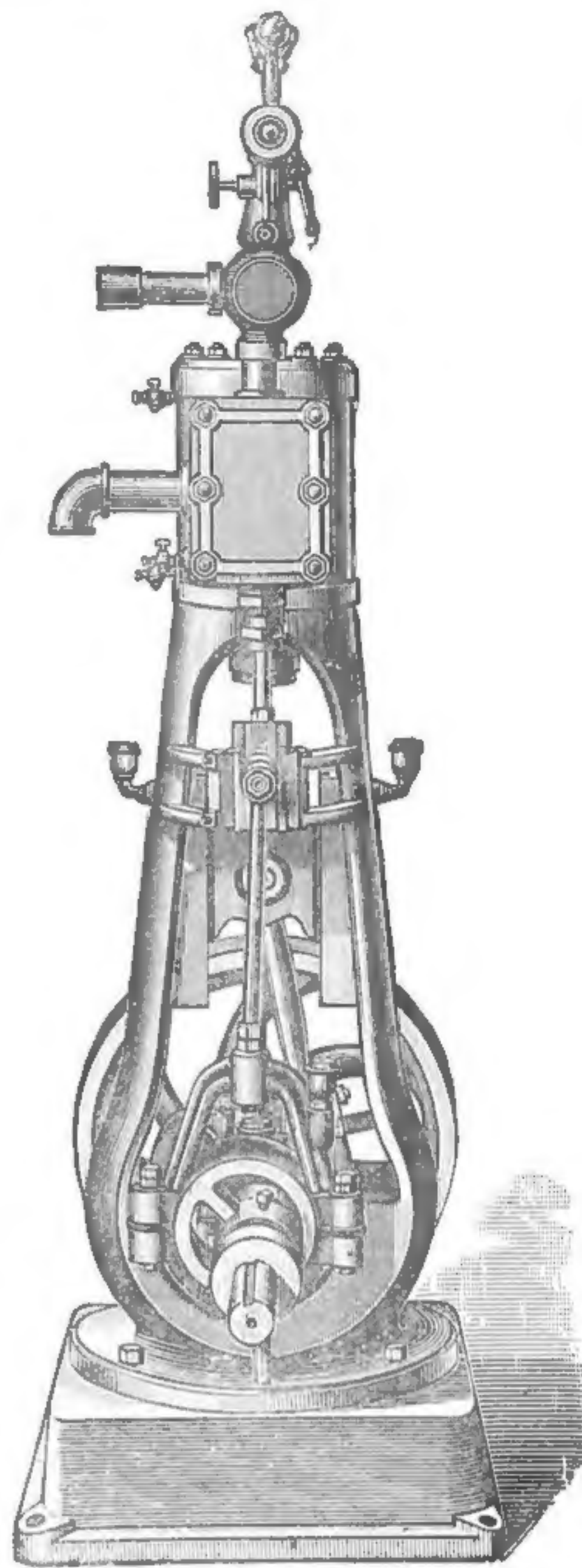
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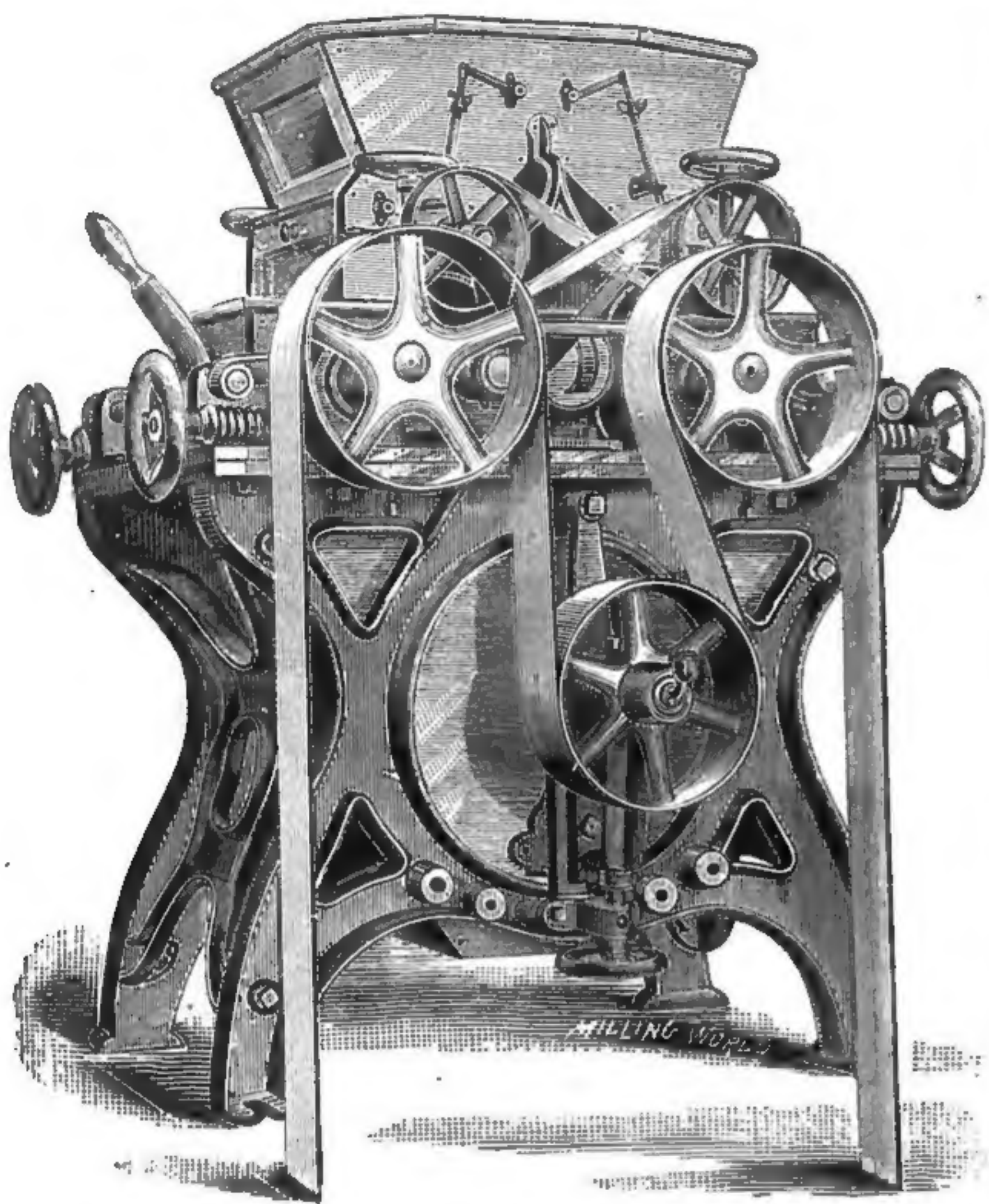
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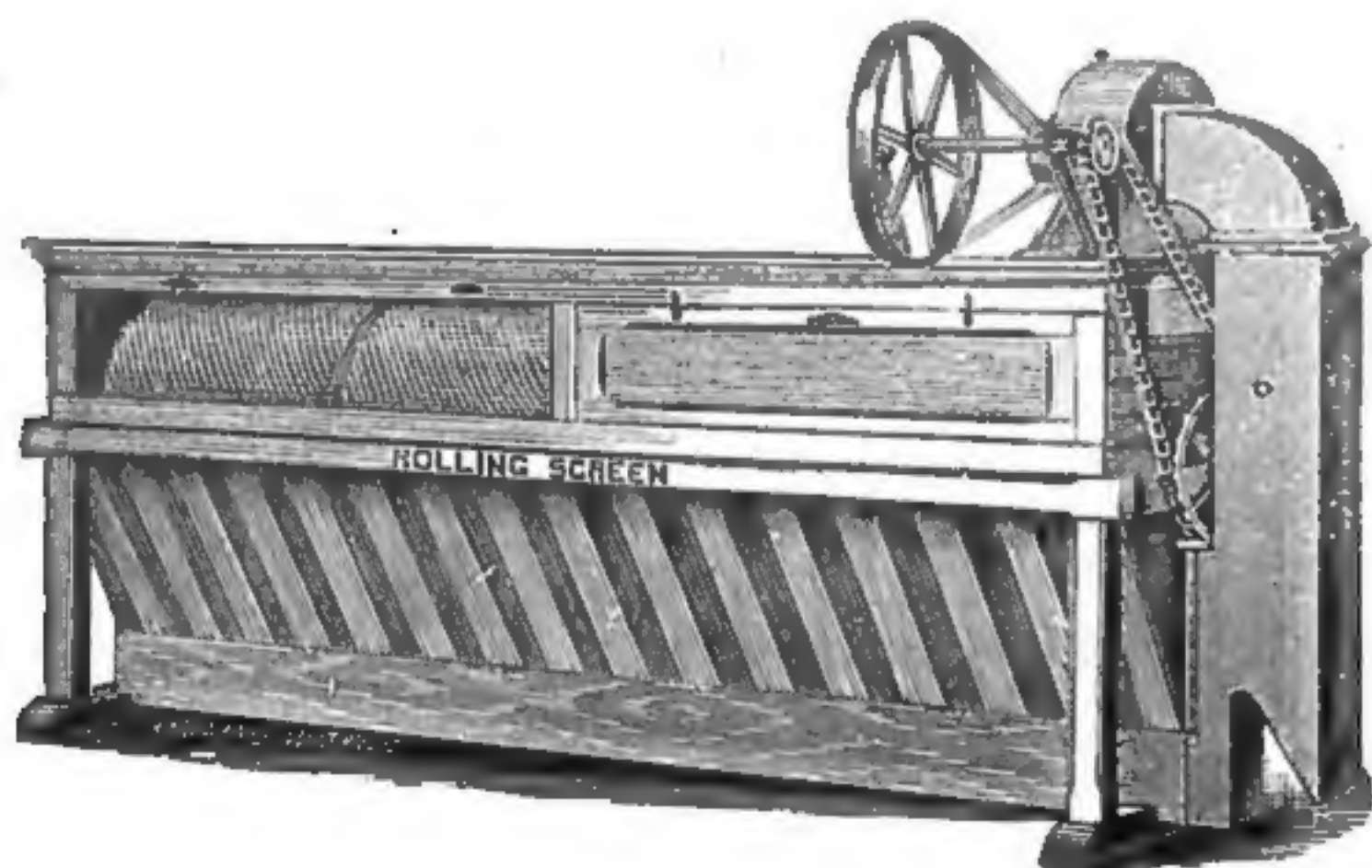
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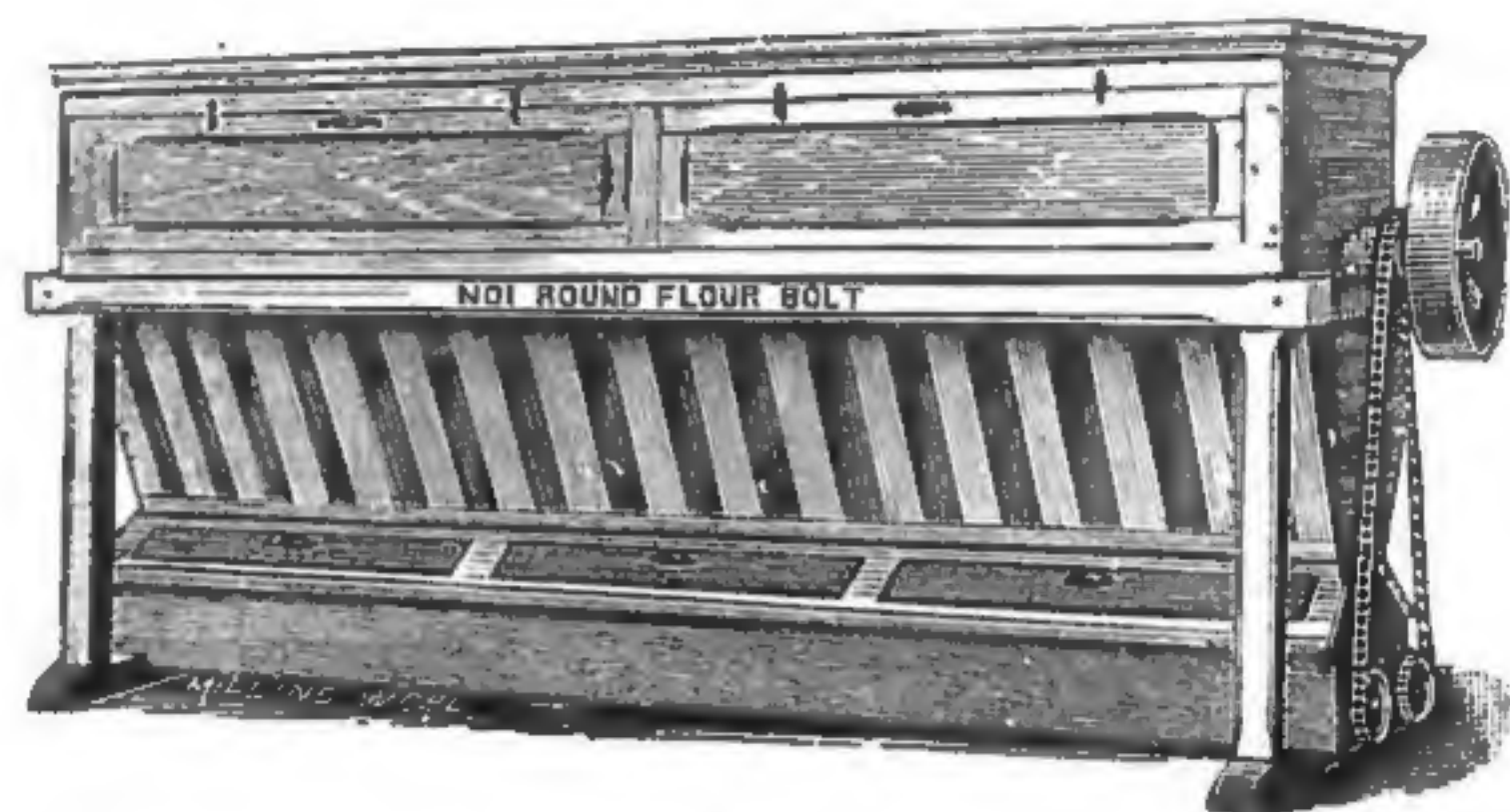
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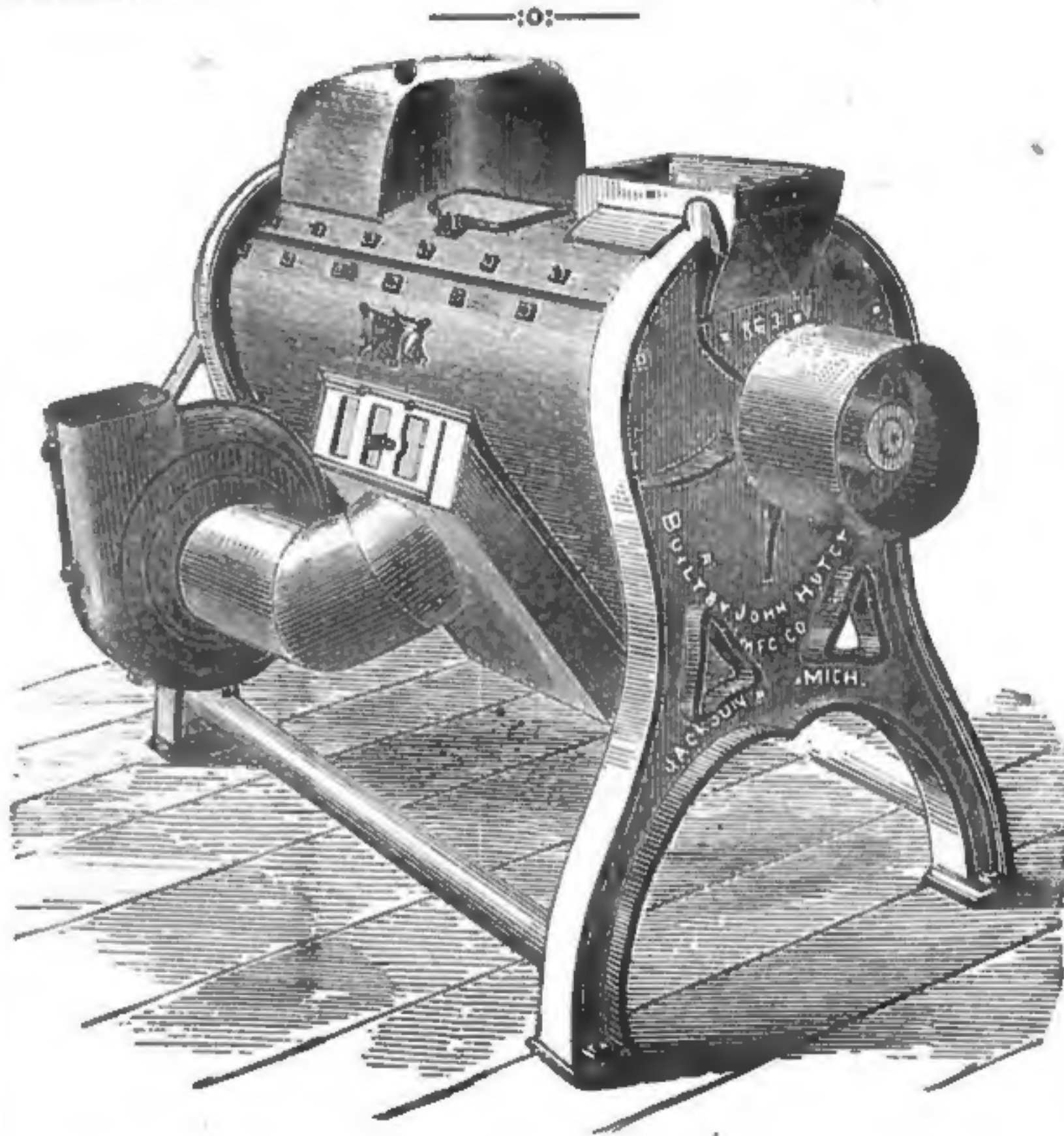


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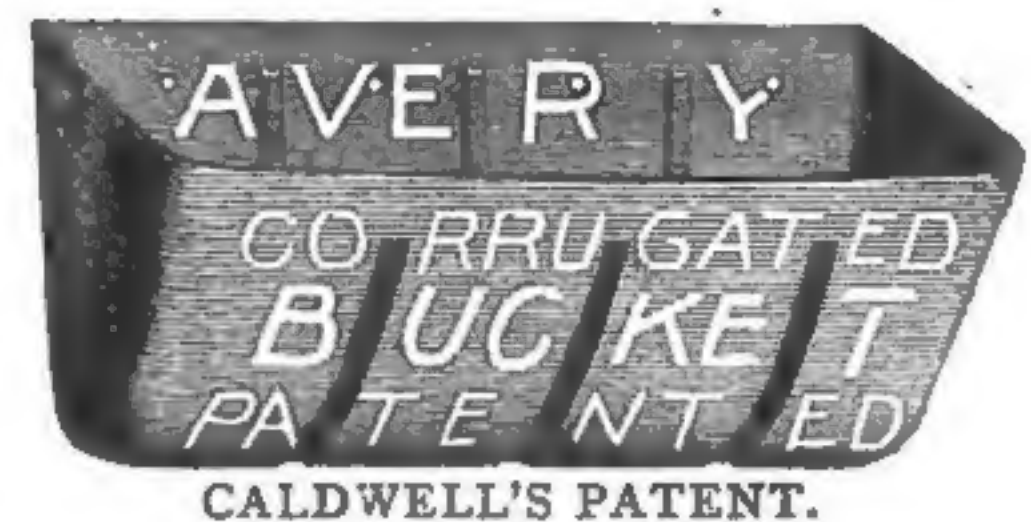
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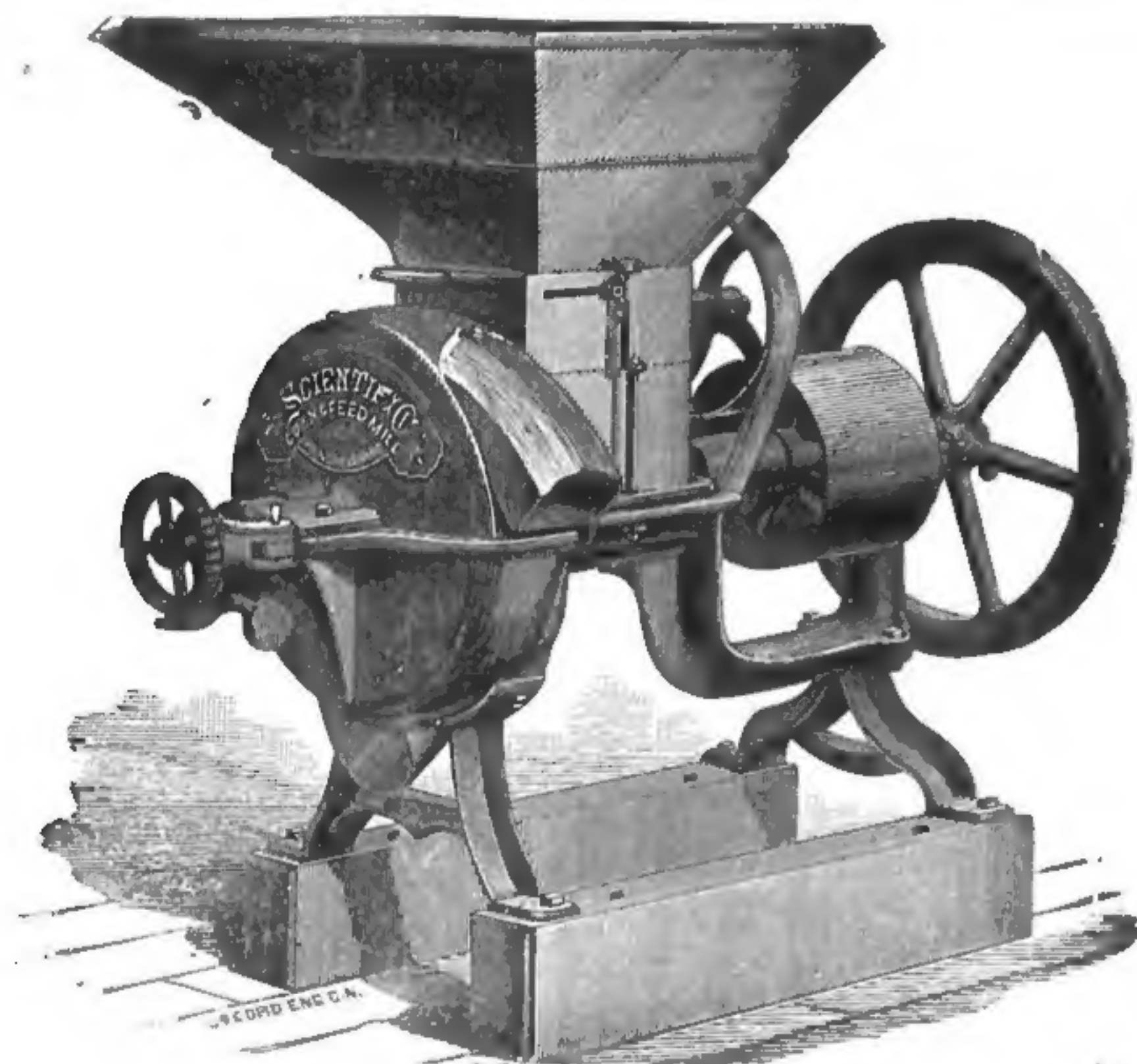
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